V. 2004 303(d) List, Assessment Categories, and TMDL Schedule

While Chapter IV provides a comprehensive look at Arizona's water quality assessment, it is primarily useful for looking up information on specific waters. However, it would take a good deal of time to find in Chapter IV just how many waters are assessed as "impaired," or to find just those waters that are assessed as "attaining all uses." This chapter provides a summary of the state's water quality assessment to the public and to EPA, beginning with statewide assessment maps for streams and lakes.

The Five Category Assessment List – Surface waters assessed in 2004 are organized by Category in **Tables 25 through 29**.

Category 1 Surface waters assessed as "attaining all uses." All designated uses are assessed as "attaining."

Category 2 Surface waters assessed as "attaining some uses." Each designated use is assessed as either "attaining," "inconclusive," or "threatened."

Category 3 Surface waters assessed as "inconclusive." All designated uses are assessed as "inconclusive" due to insufficient data to assess any designated use (e.g., insufficient samples or core parameters). By default, this category would include waters that were "not assessed" for similar reasons. (See note below.)

Category 4 Surface waters assessed as "not attaining." At least one designated use was assessed as "not attaining" and no uses were assessed as "impaired." A Total Maximum Daily Load (TMDL) analysis will not be required at this time for one of the following reasons:

- **4 A.** A TMDL has already been completed and approved by EPA but the water quality standards are not yet attained;
- **4 B.** Other pollution control requirements are reasonably expected to result in the attainment of water quality standards by the next regularly scheduled listing cycle; or
- **4 C.** The impairment is <u>not</u> related to a "pollutant" loading but rather due to "pollution" (e.g., hydrologic modification).

Category 5 Surface waters assessed as "impaired." At least one designated use was assessed as "impaired" by a pollutant. These waters must be prioritized for TMDL development **(Table 31** at the end of this chapter).

The five part list assists the state in identifying monitoring needs. For example, Category 1 waters will be monitored as part of the rotating watershed cycle as resources allow; while Category 2, 3, and 4 waters are placed on the Planning List and targeted for further monitoring over the next two watershed cycles. Category 5 waters are placed on the 303(d) List and scheduled for monitoring to support development of a TMDL.

Category 5 - 303(d) List

The 303(d) List identifies, by surface water segment, the pollutants or surface water characteristics not meeting surface water quality standards. The 303(d) List is a list of all impaired waters that require more than existing technology and permit controls to achieve or maintain surface water quality standards. EPA must approve this list and has the authority to add or remove surface waters from the list based on the federal Clean Water Act, regulations, or policies.

The objective is to systematically identify impaired surface waters and the pollutant(s) causing the impairment and ultimately establish a scientifically-based strategy (a TMDL) for restoring the surface water quality.

The status of TMDLs in progress or completed are highlighted in Chapter VIII. TMDL investigations have been initiated or completed on many of the surface waters on the 2002 303(d) List.

Based on monitoring and assessments, a surface water can move from one category to another. The objective is to eventually have all surface waters attaining uses.

Note that many surface waters in Arizona could not be assessed because water quality data or information was not collected during the monitoring period covered by this assessment. By default, all of these waters would be included in Category 3. These waters are not specifically named in this report, except for those placed on the Planning List in 2002. Once placed on the Planning List, these waters remain on the Planning List and appear in Category 3 until sufficient data are collected to make a complete assessment of all uses. Most surface waters lacking monitoring data are ephemeral or only flow for a short time, making it difficult to collect sufficient water quality data. As discussed in Chapter VIII, ADEQ's Ambient Monitoring Program is attempting to monitor and assess all perennial waters.

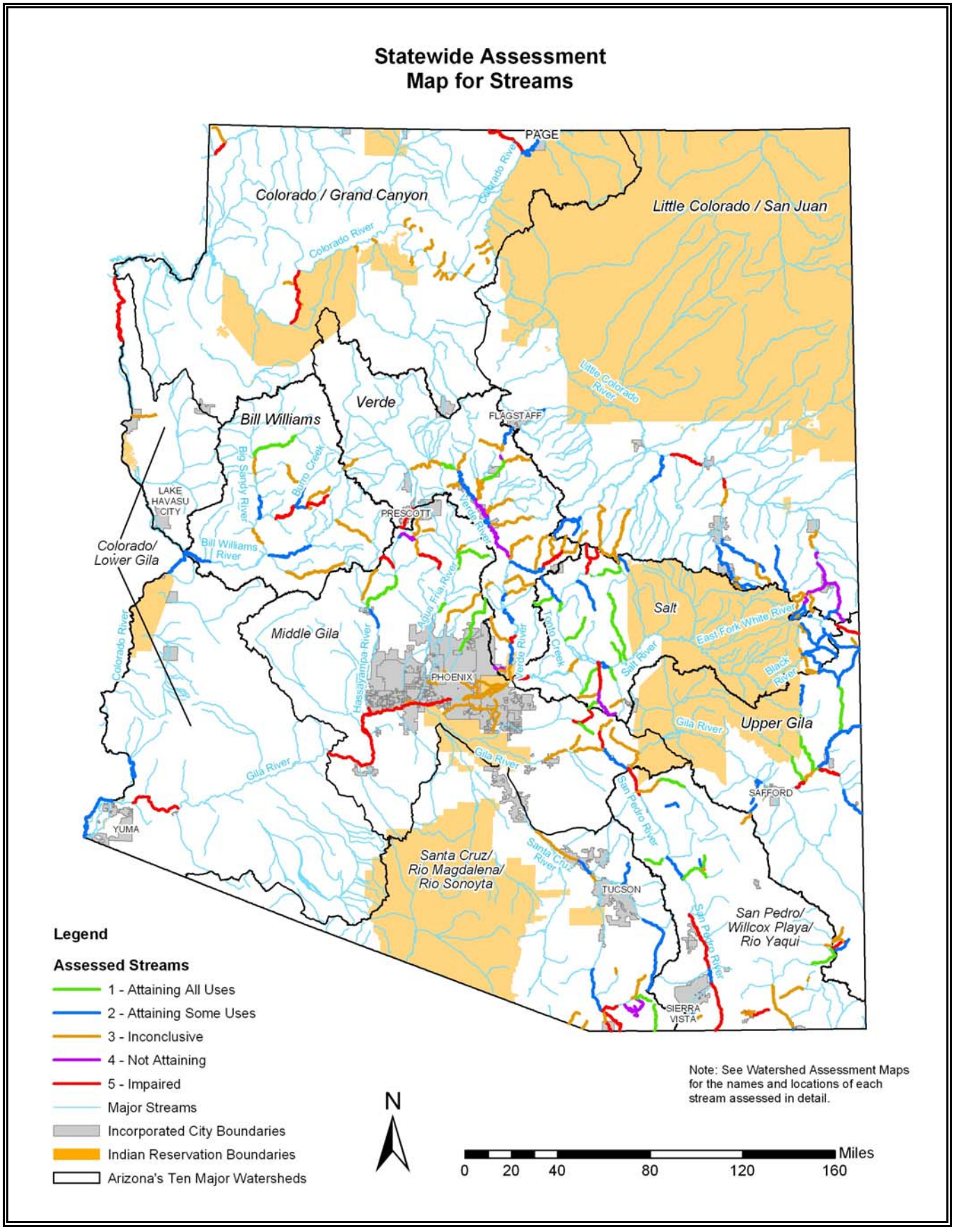

Figure 25. 2004 assessments of streams

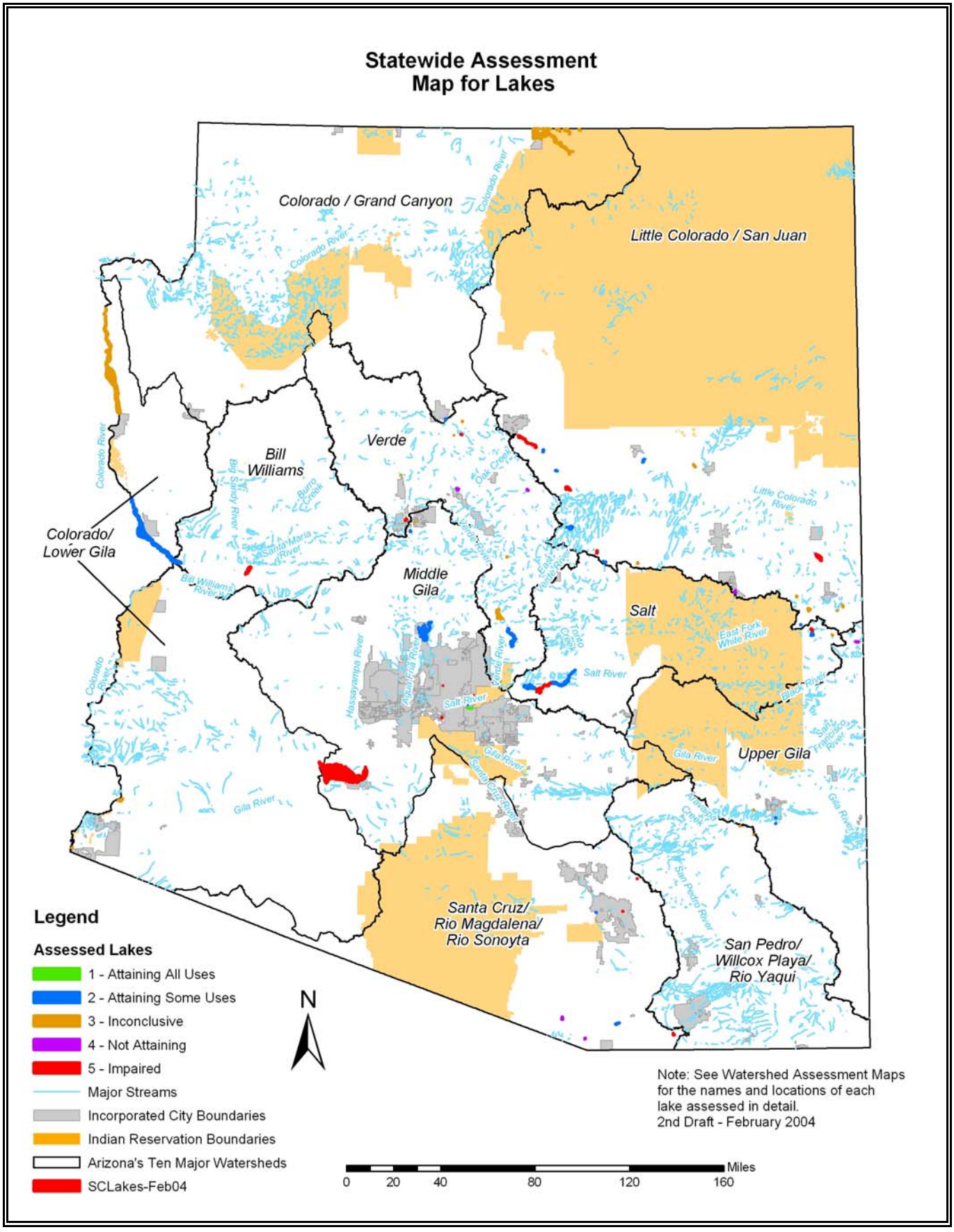

Figure 26. 2004 assessments of lakes

Assessment Categories and Planning List

Table 25. Category 5 – Impaired Waters
2004 303(d) List

At Least One Designated Use Assessed as "Impaired"
TMDL development is required for these waters.

Surface Water	Reach or Lake Number	On the 2004 303(d) List Pollutants or Parameters of Concern	Other Pollutants or Parameters of Concern Requiring Further Monitoring
Bill Williams Watershed			
Alamo Lake	AZL15030204-0040	Yes: Mercury in fish tissue (EPA*), pH (high), adding ammonia	Yes: Missing core parameters
Boulder Creek unnamed wash at 34 41 14 / 113 03 34 - Wilder Creek	AZ15030202-006B	Yes: Adding mercury (EPA*)	Yes: Copper, zinc, missing core parameters
Boulder Creek Wilder Creek - Copper Creek	AZ15030202-005A	Yes: Adding mercury (EPA*) (Restricted to segment from Wilder - Butte Creek)	Yes: Selenium, TMDL follow-up monitoring for arsenic, copper, zinc (Copper, zinc impairments restricted to segment from Wilder - Butte Creek)
Burro Creek Boulder Creek - Black Canyon	AZ15030202-004	Yes: Adding mercury (EPA*)	No
Coors Lake	AZL15030204-5000	Yes: Adding mercury in fish tissue (EPA*)	Yes: Insufficient monitoring
Colorado - Grand Canyon Watershed			
Colorado River Parashant Canyon - Diamond Creek	AZ15010002-003	Yes: Adding selenium, adding suspended sediment concentration	Yes: Turbidity, missing core parameters
Paria River Utah border - Colorado River	AZ14070007-123	Yes: Adding suspended sediment concentration	Yes: Turbidity, missing core parameters
Virgin River Beaver Dam Wash - Big Bend Wash	AZ15010010-003	Yes: Adding selenium, add suspended sediment concentration	Yes: Turbidity, missing core parameters
Colorado - Lower Gila Watershed			
Colorado River Hoover Dam - Lake Mohave	AZ15030101-015	Yes: Adding selenium	Yes: Missing core parameters
Gila River Coyote Wash - Fortuna Wash	AZ15070201-003	Yes: Adding boron, adding selenium	No
Painted Rock Borrow Pit Lake	AZL15070201-1010	Yes: DDT metabolites, toxaphene and chlordane in fish tissue (EPA*), dissolved oxygen	Yes: Ammonia, pH (high), missing core parameters
Little Colorado - San Juan Watershed			
Bear Canyon Lake	AZL15020008-0130	Yes: Adding pH (low) (EPA*)	Yes: Dissolved oxygen, selenium, missing core parameters

Surface Water	Reach or Lake Number	On the 2004 303(d) List Pollutants or Parameters of Concern		Other Pollutants or Parameters of Concern Requiring Further Monitoring	
Lake Mary (lower)	AZL15020015-0890	Yes:	Mercury in fish tissue (EPA*)	Yes:	Insufficient monitoring
Lake Mary (upper)	AZL15020015-0900	Yes:	Mercury in fish tissue (EPA*)	Yes:	Turbidity, insufficient monitoring
Little Colorado River Silver Creek - Carr Wash	AZ15020002-004	Yes:	Adding *Escherichia coli* Adding sediment (EPA*)	Yes:	Lead
Little Colorado River Porter Tank Draw - McDonalds Wash	AZ15020008-017	Yes:	Copper, silver, suspended sediment concentration	Yes:	Missing core parameters
Long Lake (lower)	AZL15020008-0820	Yes:	Adding mercury in fish tissue (EPA*)	Yes:	Insufficient seasonal coverage, missing core parameters
Lyman Lake	AZL15020001-0850	Yes:	Adding mercury in fish tissue (EPA*)	Yes	Insufficient monitoring
Soldiers Annex Lake	AZL15020008-1430	Yes:	Adding mercury in fish tissue (EPA*)	Yes:	Insufficient monitoring
Soldiers Lake	AZL15020008-1440	Yes:	Adding mercury in fish tissue (EPA*)	Yes:	Insufficient monitoring
Middle Gila Watershed					
Alvord Park Lake	AZL15060106B-0050	Yes:	Adding ammonia	Yes:	*Escherichia coli*, missing core parameters
Chaparral Lake	AZL15060106B-0300	Yes:	Adding dissolved oxygen, adding *Escherichia coli*	Yes:	Missing core parameters
Cortez Park Lake	AZL15060106B-0410	Yes:	Adding dissolved oxygen, adding pH (high)	Yes:	Fish kill (1999), missing core parameters
French Gulch headwaters - Hassayampa River	AZ15070103-239	Yes:	Copper, zinc, adding cadmium	Yes:	Missing core parameters
Gila River Salt River - Agua Fria River	AZ15070101-015	Yes:	DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	No	
Gila River Agua Fria River - Waterman Wash	AZ15070101-014	Yes:	DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes:	Insufficient monitoring
Gila River Waterman Wash - Hassayampa River	AZ15070101-010	Yes:	DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes:	Insufficient monitoring
Gila River Hassayampa River - Centennial Wash	AZ15070101-009	Yes:	DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes:	Insufficient monitoring
Gila River Centennial Wash - Gillespie Dam	AZ15070101-008	Yes:	DDT metabolites, toxaphene, and chlordane in fish tissue (EPA*), boron, adding selenium	Yes:	Turbidity/suspended sediment concentration
Gila River Gillespie Dam - Rainbow Wash	AZ15070101-007	Yes:	DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes:	Insufficient monitoring
Gila River Rainbow Wash - Sand Tank	AZ15070101-005	Yes:	DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes:	Insufficient monitoring
Gila River Sand Tank - Painted Rocks Reservoir	AZ15070101-001	Yes:	DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes:	Insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 303(d) List Pollutants or Parameters of Concern	Other Pollutants or Parameters of Concern Requiring Further Monitoring
Hassayampa River Buckeye Canal - Gila River	AZ15070103-001B	Yes: DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes: Turbidity/suspended sediment concentration
Mineral Creek Devils Canyon - Gila River	AZ15050100-012B	Yes: Copper, adding selenium	Yes: Turbidity/suspended sediment concentration, missing core parameters
Painted Rocks Reservoir	AZL15070101-1020A	Yes: DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	Yes: Insufficient monitoring
Queen Creek headwaters - Superior Mine WWTP	AZ15050100-014A	Yes: Copper	Yes: Missing core parameters
Queen Creek Superior Mine WWTP - Potts Canyon	AZ15050100-014B	Yes: Adding copper	Yes: Selenium, missing core parameters
Salt River 23rd Ave WWTP - Gila River	AZ15060106B-001D	Yes: DDT metabolites, toxaphene and chlordane in fish tissue (EPA*)	No
Turkey Creek unnamed tributary at 34 19 28 / 112 21 28 - Poland Creek	AZ15070102-036B	Yes: Cadmium, copper, zinc, adding lead	Yes: Arsenic, missing core parameters
Salt River Watershed			
Canyon Lake	AZL15060106A-0250	Yes: Adding dissolved oxygen	Yes: Ammonia and missing core parameters
Crescent Lake	AZL15060101-0420	Yes: pH (high, EPA*)	Yes: Total nitrogen, fish kill (in 1998), missing core parameters
Pinto Creek Ripper Spring - Roosevelt Lake	AZ15060103-018C	Yes: Adding selenium, adding copper	No
Salt River Stewart Mountain Dam - Verde River	AZ15060106A-003	Yes: Adding dissolved oxygen, adding copper	Yes: *Escherichia coli*
Tonto Creek headwaters - unnamed tributary at 34 18 10 / 111 04 14	AZ15060105-013A	Yes: Adding dissolved oxygen, nitrogen (EPA*)	Yes: Turbidity/suspended sediment concentration, *Escherichia coli*
Tonto Creek unnamed tributary at 34 18 10 / 111 04 14 - Haigler Creek	AZ15060105-013B	Yes: Adding nitrogen (EPA*)	Yes: Turbidity/suspended sediment concentration, *Escherichia coli*
San Pedro - Willcox Playa - Rio Yaqui Watershed			
Brewery Gulch Wildcat Canyon - Mule Gulch	AZ15080301-337	Yes: Adding copper (EPA*)	Yes: pH
Mule Gulch headwaters - above Lavender Pit	AZ15080301-090A	Yes: Copper	Yes: Missing core parameters.
Mule Gulch above Lavender Pit - Bisbee WWTP	AZ15080301-090B	Yes: Copper, pH (low, EPA*)	Yes: Lead, missing core parameters

Surface Water	Reach or Lake Number	On the 2004 303(d) List Pollutants or Parameters of Concern	Other Pollutants or Parameters of Concern Requiring Further Monitoring
Mule Gulch Bisbee WWTP - Highway 80 Bridge	AZ15080301-090C	Yes: Copper, zinc, pH (low), adding cadmium	Yes: Lead, missing core parameters
San Pedro River Mexico border - Charleston	AZ15050202-008	Yes: Copper	Yes: Selenium
San Pedro River Babocomari Creek - Dragoon Wash	AZ15050202-003	Yes: Adding *Escherichia coli*	No
San Pedro River Dragoon Wash - Tres Alamos Wash	AZ15050202-002	Yes: Nitrate	Yes: Fecal coliform/*Escherichia coli*, suspended sediment concentration /turbidity, missing core parameters
San Pedro River Aravaipa Creek - Gila River	AZ15050203-001	Yes: Adding *Escherichia coli*, adding selenium	Yes: Mercury
Santa Cruz - Rio Magdalena - Rio Sonoyta			
Lakeside Lake	AZL15050302-0760	Yes: Adding dissolved oxygen, adding ammonia Adding nitrogen, phosphorus, chlorophyll (EPA*)	Yes: Turbidity, missing core parameters
Nogales and East Nogales washes Mexico border - Potrero Creek	AZ15050301-011	Yes: Chlorine, adding *Escherichia coli*, adding ammonia, adding copper	Yes: Turbidity/suspended sediment concentration
Parker Canyon Lake	AZL15050301-1040	Yes: Adding mercury in fish tissue (EPA*)	Yes: Missing core parameters
Rose Canyon Lake	AZL15050302-1260	Yes: Adding pH (high and low) (EPA*)	Yes: Turbidity, missing core parameters
Santa Cruz River Mexico border - Nogales WWTP	AZ15050301-010	Yes: *Escherichia coli*	No
Sonoita Creek 750 feet below WWTP - Santa Cruz River	AZ15050301-013C	Yes: Adding zinc	Yes: Copper, dissolved oxygen
Upper Gila Watershed			
Cave Creek headwaters - South Fork of Cave Creek	AZ15040006-852A	Yes: Adding selenium	No
Gila River Skully Creek - San Francisco River	AZ15040002-001	Yes: Adding selenium	Yes: Dissolved oxygen, lead
Gila River Bonita Creek - Yuma Wash	AZ15040005-022	Yes: Adding *Escherichia coli* Adding sediment (EPA*)	Yes: Copper, lead
San Francisco River headwaters - New Mexico border	AZ15040004-023	Yes: Adding sediment (EPA*)	No
Verde Watershed			
East Verde River Ellison Creek - American Gulch	AZ15060203-022B	Yes: Adding selenium	No
Granite Creek headwaters - Willow Creek	AZ15060202-059A	Yes: Adding dissolved oxygen (EPA*)	Yes: *Escherichia coli*, mercury, turbidity/suspended sediment concentration, missing core parameters

Surface Water	Reach or Lake Number	On the 2004 303(d) List Pollutants or Parameters of Concern	Other Pollutants or Parameters of Concern Requiring Further Monitoring
Verde River Bartlett Dam - Camp Creek	AZ15060203-004	Yes: Adding selenium, copper	No
Watson Lake	AZL15060202-1590	Yes: Adding dissolved oxygen, pH (high), nitrogen (EPA*)	Yes: Fish kill, missing core parameters
Whitehorse Lake	AZL15060202-1630	Yes: Dissolved oxygen (EPA*)	Yes: Ammonia, turbidity, fish kill in 1999, missing core parameters

* Indicates that EPA placed the pollutant or parameter on the 2002 or 2004 303(d) List, rather than ADEQ.

Table 26. Category 4 – Not Attaining (Impaired) Waters

At Least One Designated Use Assessed as "Not Attaining"
All Waters are On the Planning List for Follow Up Monitoring

4A = A TMDL has been approved by EPA but designated uses are not yet "attaining."
4B = Other pollution control requirements are expected to result in the attainment of water quality standards by the next regularly scheduled listing cycle (2 years currently).
4C = The impairment is not related to a "pollutant" loading, but caused by pollution (e.g., hydrologic modifications).

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Bill Williams Watershed (no Category 4 waters)		
Colorado - Grand Canyon Watershed (no Category 4 waters)		
Colorado - Lower Gila Watershed (no Category 4 waters)		
Little Colorado - San Juan Watershed		
Little Colorado River West Fork of the Little Colorado River - Water Canyon Creek	AZ15020001-011	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved for adjacent reaches in 2002) Other: Missing core parameters
Little Colorado River Water Canyon Creek - Nutrioso Creek	AZ15020001-010	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved in 2002) Other: Insufficient monitoring
Little Colorado River Nutrioso Creek - Carnero Wash	AZ15020001-009	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved in 2002) Other: *Escherichia coli*
Little Colorado River unnamed reach (15020001-021) to Lyman Lake	AZ15020001-005	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved for adjacent reaches in 2002) Other: *Escherichia coli*
Nutrioso Creek headwaters - Picnic Creek	AZ15020001-017	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved in 2000)
Nutrioso Creek Picnic Creek - Little Colorado River	AZ15020001-015	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved in 2000) Other: Insufficient monitoring
Rainbow Lake	AZL15020005-1170	Yes 4A: Nutrients and pH (TMDLs approved in 2000) Other: Missing core parameters
Middle Gila Watershed		
Cash Mine Creek headwaters - Hassayampa River	AZ15070103-349	Yes 4A: Copper, zinc (metals loadings addressed in Hassayampa TMDLs approved in 2002) Other: Insufficient monitoring
Cash Mine Creek, unnamed tributary of headwaters - Cash Mine Creek	AZ15070103-415	Yes 4A: Cadmium, copper, zinc (loadings addressed in Hassayampa TMDLs approved in 2002) Other: Lead, insufficient monitoring
Hassayampa River headwaters - Copper Creek	AZ15070103-007A	Yes 4A: Cadmium, copper, zinc, and pH (TMDLs approved in 2002) Other: Missing core parameters
Salt River Watershed		

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Christopher Creek headwaters - Tonto Creek	AZ15060105-353	Yes 4a: *Escherichia coli* (TMDL approved in 2004) Other: Turbidity/suspended sediment concentration
Gibson Mine tributary headwaters - Pinto Creek	AZ15060103-887	Yes 4A: Copper (loading addressed in Pinto Creek copper TMDL approved in 2001) Other: pH (low), zinc, missing core parameters
Pinto Creek headwaters - tributary at 33 19 27/ 110 54 56	AZ15060103-018A	Yes 4A: Copper (TMDL approved in 2001) Other: Insufficient monitoring
Pinto Creek tributary at 33 19 27 / 110 54 56 - Ripper Spring	AZ15060103-018B	Yes 4A: Copper (TMDL approved in 2001) Other: Selenium, zinc, missing core parameters
San Pedro - Willcox Playa - Rio Yaqui Watershed (no Category 4 waters)		
Santa Cruz - Rio Magdalena - Rio Sonoyta		
Alum Gulch headwaters - 31 28 20 / 110 43 51	AZ15050301-561A	Yes 4A: Cadmium, copper, pH (low), zinc (TMDLs approved in 2003) Other: Missing core parameter
Alum Gulch 31 28 20 / 110 43 51 - 31 29 17/ 110 44 25	AZ15050301-561B	Yes 4A: Cadmium, copper, pH (low), zinc (TMDLs approved in 2003) Other: Missing core parameters
Arivaca Lake	AZL15050304-0080	Yes 4A: Mercury in fish tissue (TMDL approved in 1999) Other: Dissolved oxygen, pH (high), selenium, fish kill in 1999, missing core parameters
Cox Gulch headwaters - 3R Canyon	AZ15050301-560	Yes 4A: Cadmium, copper, zinc, and pH (low) (loadings included in 3R Canyon TMDLs approved in 2003) Other: Missing core parameters
Cox Gulch, unnamed tributary of headwaters - Cox Gulch	AZ15050301-877	Yes 4A: Cadmium, copper, zinc, and pH (low) (loadings included in 3R Canyon TMDLs approved in 2003) Other: Insufficient monitoring
Harshaw Creek headwaters - Sonoita Creek	AZ15050301-025	Yes 4A: Copper and pH (low) (TMDLs approved in 2003) Other: Missing core parameter
Harshaw Creek, unnamed tributary of (Endless Chain Mine tributary) headwaters - Harshaw Creek	AZ15050301-888	Yes 4A: Copper and pH (low) (loadings included in TMDLs for Harshaw Creek approved in 2003)
Humbolt Canyon headwaters - Alum Gulch	AZ15050301-340	Yes 4A: Cadmium, copper, zinc, and pH (low) (TMDLs for Alum Gulch approved in 2003) Other: Missing core parameters
Pena Blanca Lake	AZL15050301-1070	Yes 4A: Mercury in fish tissue (TMDL approved in 1999) Other: pH (low), selenium, turbidity, missing core parameters
Three R Canyon headwaters - 31 28 35 / 110 46 19	AZ15050301-558A	Yes 4A: Cadmium, copper, zinc, and pH (low) (TMDLs approved in 2003) Other: Insufficient monitoring
Three R Canyon 31 28 35 / 110 46 19 - 31 28 27/ 110 47 12	AZ15050301-558B	Yes 4A: Cadmium, copper, zinc, and pH (low) (TMDLs approved in 2003) Other: Missing core parameters
Three R Canyon 31 28 27 / 110 47 12 - Sonoita Creek	AZ15050301-558C	Yes 4A: Copper and pH (low) (TMDLs approved in 2003) Other: Missing core parameter
Three R Canyon, unnamed tributary of headwaters - Three R Canyon	AZ15050301-889	Yes 4A: Cadmium, copper, zinc, and pH (low) (loadings for this tributary included in the TMDLs for 3R Canyon approved in 2003) Other: Insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Upper Gila Watershed		
Luna Lake	AZL15040004-0840	Yes 4A: Dissolved oxygen, pH (high), and a fish kill in 1999 (Nutrient TMDL approved in 2000. TMDL addressed low dissolved oxygen, high pH, and fish kills.) Other: Missing core parameters
Verde Watershed		
Grande Wash headwaters - Ashbrook Wash	AZ15060203-991	Yes 4B: *Escherichia coli* (Fountain Hills WWTP has now changed disposal method to recharge, thereby eliminating discharges to this wash. *E. coli* levels are expected to meet water quality standards for the next assessment.) Other: Missing core parameters
Oak Creek At Slide Rock State Park	AZ15060202-018B	Yes 4A: *Escherichia coli* and swimming closures (TMDL approved in 1999) Other: Missing core parameters
Pecks Lake	AZL15060202-1060	Yes 4A: Dissolved oxygen (nutrient TMDL approved in 2000 addressed low dissolved oxygen.) Other: Missing core parameters
Stoneman Lake	AZL15060202-1490	Yes 4A: pH (high) (nutrient TMDL approved in 2000 addressed high pH.) Other: Arsenic, missing core parameters
Verde River Oak Creek - Beaver Creek	AZ15060202-015	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved in 2002) Other: Insufficient monitoring
Verde River Beaver Creek - HUC boundary 15060203	AZ15060202-001	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved in 2002) Other: Insufficient monitoring
Verde River West Clear Creek - Fossil Creek	AZ15060203-025	Yes 4A: Turbidity/suspended sediment concentration (turbidity TMDL approved in 2002 in adjacent reaches) Other: Selenium

Table 27. Category 3 -- Inconclusive Waters

All Designated Uses Assessed as "Inconclusive"
All Waters are On the Planning List for Follow Up Monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern	
Bill Williams Watershed			
Big Sandy River Deluge Wash - Tule Wash	AZ15030201-011	Yes:	Turbidity/Suspended sediment concentration, missing core parameters
Big Sandy River Rupley Wash - Alamo Lake North	AZ15030201-001	Yes:	Dissolved oxygen, missing core parameters
Butte Creek headwaters - Boulder Creek	AZ15030202-163	Yes:	Mercury, selenium, missing core parameters
Date Creek Cottonwood Creek - unnamed tributary (15030203-008)	AZ15030203-003	Yes:	Insufficient monitoring
Francis Creek headwaters - Burro Creek	AZ15030202-012	Yes:	Turbidity/Suspended sediment concentration, insufficient monitoring
Kirkland Creek Skull Valley - Santa Maria River	AZ15030203-015	Yes:	*Escherichia coli*, insufficient monitoring
Wilder Creek headwaters - Boulder Creek	AZ15030202-007	Yes:	Missing core parameters
Colorado - Grand Canyon Watershed			
Beaver Dam Wash Utah border - Virgin River	AZ15010010-009	Yes:	Insufficient monitoring
Boucher Creek California Wash - Colorado River	AZ15010002-017	Yes:	Insufficient monitoring
Chuar (Lava) Creek tributary at 36 11 36 / 111 52 17 - Lava Creek	AZ15010001-024B	Yes:	Insufficient monitoring
Clear Creek tributary at 36 09 12 / 111 58 25 - Colorado River	AZ15010001-025B	Yes:	Insufficient monitoring
Crystal Creek tributary at 36 13 42 / 112 11 48 - Colorado River	AZ15010002-018B	Yes:	Insufficient monitoring
Deer Creek tributary at 36 26 16 / 112 28 15.5 - Colorado River	AZ15010002-019B	Yes:	Insufficient monitoring
Garden Creek headwaters - Pipe Creek	AZ15010002-841	Yes:	Insufficient monitoring
Havasu Canyon Creek Havasupai Indian Reservation - Colorado River	AZ15010004-001	Yes:	Turbidity/suspended sediment concentration, insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Hermit Creek Hermit Pack Trail crossing - Colorado River	AZ15010002-020B	Yes: Insufficient monitoring
Kwagunt Creek tributary at 36 13 29 / 111 55 24 - Colorado River	AZ15010001-031B	Yes: Insufficient monitoring
Lake Powell	AZL14070006-1130	Yes: *Escherichia coli*, missing core parameters
Monument Creek headwaters - Colorado River	AZ15010002-845	Yes: Insufficient monitoring
Nankoweap Creek tributary at 36 15 30 / 111 15 22 - Colorado River	AZ15010001-033B	Yes: Insufficient monitoring
National Canyon Creek headwaters - Colorado River	AZ15010002-016	Yes: Insufficient monitoring
Royal Arch Creek headwaters - Colorado River	AZ15010002-871	Yes: Insufficient monitoring
Saddle Canyon Creek tributary at 36 21 35.5 / 112 22 46 - Colorado River	AZ15010002-703B	Yes: Insufficient monitoring
Shinumo Creek tributary at 36 18 21 / 112 18 03 - Colorado River	AZ15010002-029B	Yes: Insufficient monitoring
Spring Canyon Creek headwaters - Colorado River	AZ15010002-318	Yes: Insufficient monitoring
Tapeats Creek headwaters - Colorado River	AZ15010002-696	Yes: Insufficient monitoring
Three Springs Creek headwaters - Colorado River	AZ15010002-1180	Yes: Insufficient monitoring
Vasey's Paradise (Spring) at Colorado River	AZ15010001-SP01	Yes: Insufficient monitoring
Colorado - Lower Gila Watershed		
Colorado River, unnamed tributary (near Thumb Butte) headwaters - Colorado River	AZ15030101-560	Yes: Insufficient monitoring
Hunter's Hole (lake)	AZL15030108-0660	Yes: Selenium, insufficient monitoring
Lake Mohave	AZL15030101-0960	Yes: Insufficient monitoring
Mittry Lake	AZL15030107-0950	Yes: Insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern	
Little Colorado - San Juan Watershed			
Black Canyon Lake	AZL15020010-0180	Yes:	Fish kill related to fire (2002), insufficient monitoring
Brown Creek headwaters - Silver Creek	AZ15020005-016	Yes:	Insufficient monitoring
Buck Springs Canyon Creek headwaters - Leonard Canyon	AZ15020008-557	Yes:	pH (low), turbidity/suspended sediment concentration, insufficient monitoring
Bunch Reservoir	AZL15020001-0230	Yes:	Dissolved oxygen, missing core parameters
Carnero Lake	AZL15020001-0260	Yes:	Dissolved oxygen, pH (high), missing core parameters
Chevelon Creek headwaters - West Chevelon Creek	AZ15020010-006	Yes:	Dissolved oxygen, insufficient monitoring
Cholla Lake	AZL15020008-0320	Yes:	Fish kill (2002), missing core parameters
Fish Creek headwaters - Little Colorado River	AZ15020001-211	Yes:	Mercury, insufficient monitoring
Hall Creek headwaters - Little Colorado River	AZ15020001-012	Yes:	Insufficient monitoring
Lee Valley Creek Lee Valley Reservoir - East Fork Little Colorado River	AZ15020001-232B	Yes:	Insufficient monitoring
Little Colorado River HUC boundary 15020001 - unnamed tributary (15020002-025)	AZ15020002-024	Yes:	Insufficient monitoring
Little Colorado River Zion Reservoir - Concho Creek	AZ15020002-016	Yes:	Suspended sediment concentration, missing core parameters
Little Colorado River, South Fork headwaters - Little Colorado River	AZ15020001-027	Yes:	Insufficient monitoring
McKay Reservoir	AZL15020001-0007	Yes:	Dissolved oxygen, pH (high), insufficient monitoring
Nelson Reservoir	AZL15020001-1000	Yes:	Insufficient monitoring
Porter Creek headwaters - Show Low Creek	AZ15020005-246	Yes:	Turbidity/suspended sediment concentration, insufficient monitoring
River Reservoir	AZL15020001-1220	Yes:	Missing core parameters
Silver Creek Seven Mile Draw - Little Colorado River	AZ15020005-001	Yes:	Turbidity/suspended sediment concentration, insufficient monitoring
Tunnel Reservoir	AZL15020001-1550	Yes:	Dissolved oxygen, missing core parameters
Walnut Creek Pine Lake - Rainbow Lake	AZ15020005-238	Yes:	Insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Willow Creek headwaters - East Clear Creek	AZ15020008-011	Yes: Insufficient monitoring
Willow Spring Creek headwaters - Chevelon Creek	AZ15020010-240	Yes: Insufficient monitoring
Woods Canyon Creek headwaters - Chevelon Creek	AZ15020010-084	Yes: Dissolved oxygen, insufficient monitoring
Middle Gila Watershed		
Antelope Creek headwaters - Martinez Creek	AZ15070103-010	Yes: Insufficient monitoring
Arizona Canal Granite Reef Dam - Cholla water treatment plant	AZ15060106B-099A	Yes: Missing core parameters
Arizona Canal Cholla water treatment plant - HUC boundary 15070102	AZ15060106B-099B	Yes: Missing core parameters
Blue John Creek headwaters - unnamed tributary to Lynx Creek	AZ15070102-471	Yes: Cadmium, copper, zinc, insufficient monitoring
Buckeye Canal Gila River - South Extension Canal	AZ15070101-209	Yes: DDE (DDT pesticide metabolite), missing core parameters
Consolidated Canal HUC boundary 15060106B - above water treatment plant intake	AZ15050100-074A	Yes: Missing core parameters
Dripping Spring Wash headwaters - Gila River	AZ15050100-011	Yes: Insufficient monitoring
Eastern Canal Water treatment plant intake (below Warner Road) - terminus	AZ15050100-207B	Yes: Missing core parameters
Fain Lake	AZL15070102-0005	Yes: Turbidity, insufficient monitoring
Galena Gulch headwaters - Agua Fria River	AZ15070102-745	Yes: Cyanide, insufficient monitoring
Gila River Dripping Spring Wash - San Pedro River	AZ15050100-009	Yes: Insufficient monitoring
Gila River Mineral Creek - Donnelly Wash	AZ15050100-007	Yes: Copper, turbidity/suspended sediment concentration, insufficient monitoring
Gila River Ashurst-Hayden Dam - Florence wastewater treatment plant	AZ15050100-003B	Yes: Copper, insufficient monitoring
Grand Canal HUC boundary 15070101 - New River	AZ15070102-250	Yes: Missing core parameters
Hassayampa River, unnamed tributary of headwaters - Hassayampa River (segment 007)	AZ15070102-417	Yes: Copper, insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Indian Bend Wash headwaters - Salt River	AZ15060106B-179	Yes: Lead, missing core parameters
Little Ash Creek headwaters - Ash Creek	AZ15070102-039	Yes: Insufficient monitoring
Lynx Creek headwaters - 34 34 29 / 112 21 05	AZ15070102-033A	Yes: Cadmium, copper, insufficient monitoring
Lynx Creek, unnamed tributary of headwaters - Lynx Creek	AZ15070102-124	Yes: Cadmium, copper, zinc, insufficient monitoring
Martinez Canyon Creek headwaters - Box Canyon	AZ15050100-080	Yes: Insufficient monitoring
Mineral Creek headwaters - Devils Canyon	AZ15050100-012A	Yes: Insufficient monitoring
New River headwaters - Interstate 17	AZ15070102-006A	Yes: Insufficient monitoring
Salt River 2 km below Granite Reef Dam - Interstate 10 bridge	AZ15060106B-001B	Yes: Insufficient monitoring
South Canal Granite Reef Dam - Consolidated Canal	AZ15060106B-180	Yes: Missing core parameters
Tempe Canal HUC boundary 15050100 - Western Canal	AZ15050100-115	Yes: Missing core parameters
Turkey Creek headwaters - unnamed tributary at 34 19 28 / 112 21 28	AZ15070102-036A	Yes: Missing core parameters
Western Canal Tempe Canal - HUC boundary 15050100	AZ15060106B-262	Yes: Missing core parameters
Western Canal HUC boundary 15050100 - terminus	AZ15050100-990	Yes: Missing core parameters
Salt River Watershed		
Bear Wallow Creek, North Fork headwaters - Bear Wallow Creek	AZ15060101-022	Yes: Missing core parameters
Bear Wallow Creek, South Fork headwaters - Bear Wallow Creek	AZ15060101-258	Yes: Insufficient monitoring
Bloody Tanks Wash Schultz Ranch - Miami Wash	AZ15060103-034B	Yes: Copper, insufficient monitoring
Cottonwood Canyon headwaters - Pinto Creek	AZ15060103-891	Yes: Insufficient monitoring
Gold Gulch Canyon headwaters - Pinto Creek	AZ15060103-894	Yes: Insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Hay Creek headwaters - West Fork Black River	AZ15060101-353	Yes: Insufficient monitoring
Lake Sierra Blanca	AZL15060101-1390	Yes: Fish kill (1998), insufficient monitoring
Miller Springs Canyon headwaters - Pinto Creek	AZ15060103-892	Yes: Selenium, turbidity/suspended sediment concentration, missing core parameters
Pinto Creek, West Fork headwaters - Pinto Creek	AZ15060103-066	Yes: Insufficient monitoring
Reservation Creek headwaters - Black River	AZ15060101-010	Yes: Insufficient monitoring
Salt River Roosevelt Lake - Apache Lake	AZ15060106A-024	Yes: Insufficient monitoring
Snake Creek headwaters - Black River	AZ15060101-045	Yes: Missing core parameters
Stinky Creek Fort Apache Reservation - West Fork Black River	AZ15060101-352A	Yes: Missing core parameters
San Pedro - Willcox Playa - Rio Yaqui Watershed		
Aravaipa Creek Wilderness Area - San Pedro River	AZ15050203-004C	Yes: Missing core parameters
Bass Canyon, unnamed tributary of headwaters - Bass Canyon Creek	AZ15050203-935	Yes: Insufficient monitoring
C Canyon headwaters - Mule Gulch	AZ15080301-342	Yes: Insufficient monitoring
Dubacher Canyon headwaters - Mule Gulch	AZ15080301-075	Yes: Insufficient monitoring
Grant Creek headwaters - trib at 32 38 09 / 109 56 35	AZ15050201-033A	Yes: Insufficient monitoring
Hendricks Gulch headwaters - Mule Gulch	AZ15080301-335	Yes: Insufficient monitoring
Leslie Canyon Creek headwaters - Whitewater Draw	AZ15080301-007	Yes: Insufficient monitoring
Miller Canyon Creek headwaters - San Pedro River	AZ15050202-409A	Yes: Insufficient monitoring
Morales Creek headwaters - Mule Gulch	AZ15080301-331	Yes: Insufficient monitoring
Mule Gulch Highway 80 bridge - Whitewater Draw	AZ15080301-090D	Yes: Copper exceedance and insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Mural and Grassy Hill tributary headwaters - Mule Gulch	AZ15080301-334	Yes: Insufficient monitoring
OK and Youngblood tributary headwaters - Brewery Gulch	AZ15080301-1000	Yes: Insufficient monitoring
Riggs Flat Lake	AZL15050201-1210	Yes: Turbidity, insufficient monitoring
Snow Flat Lake	AZL15050201-1420	Yes: Insufficient monitoring
Spring Canyon Creek headwaters - Mule Gulch	AZ15080301-333	Yes: Insufficient monitoring
Twin Pond	AZL15080302-0001	Yes: Insufficient monitoring
Ward Canyon Creek headwaters - Turkey Creek	AZ15050201-433	Yes: Insufficient monitoring
Whitewater Draw Gadwell Canyon - unnamed tributary (15080301-003)	AZ15080301-004	Yes: Lead, insufficient monitoring
Whitewater unnamed tributary (15080301-003) - unnamed tributary at 31 20 36 / 109 34 46	AZ15080301-002A	Yes: Lead, zinc, insufficient monitoring
Winwood Canyon headwaters - Mule Gulch	AZ15080301-340	Yes: Insufficient monitoring
Santa Cruz - Rio Magdalena - Rio Sonoyta		
Chimenea Creek headwaters - Rincon Creek	AZ15050302-140	Yes: Insufficient monitoring
Loma Verde Wash headwaters - unnamed tributary to Tanque Verde Wash	AZ15050302-268	Yes: Insufficient monitoring
Madera Canyon Creek headwaters - tributary at 31 43 42 / 110 52 50	AZ15050301-322A	Yes: Insufficient monitoring
Madrona Creek headwaters - Rincon Creek	AZ15050302-138	Yes: Insufficient monitoring
Pena Blanca Canyon Creek Mexico border - Pena Blanca Lake	AZ15050301-808	Yes: Insufficient monitoring
Potrero Creek Interstate 19 - Santa Cruz River	AZ15050301-500B	Yes: Chlorine, copper, missing core parameters
Santa Cruz River Roger Road WWTP outfall - Rillito Creek	AZ15050301-003B	Yes: Missing core parameters
Santa Cruz River HUC boundary 15050303 - Baumgartner Road	AZ15050303-005A	Yes: Missing core parameters

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Sonoita Creek headwaters - Patagonia WWTP	AZ15050301-013A	Yes: Insufficient monitoring
Sycamore Canyon Creek headwaters - Mexico border	AZ15080200-002	Yes: Insufficient monitoring
Upper Gila Watershed		
Cave Creek, North Fork headwaters - Cave Creek	AZ15040006-856	Yes: Insufficient monitoring
Cluff Pond #3	AZL15040005-0370	Yes: Insufficient monitoring
East Turkey Creek headwaters - unnamed tributary at 31 58 22 / 109 12 17	AZ15040006-837A	Yes: Insufficient monitoring
Gila River San Francisco River - Eagle Creek	AZ15040005-024	Yes: Turbidity/suspended sediment concentration, insufficient monitoring
Gila River Eagle Creek - Bonita Creek	AZ15040005-023	Yes: Turbidity/suspended sediment concentration, insufficient monitoring
Turkey Creek headwaters - Campbell Blue Creek	AZ15040004-060	Yes: Missing core parameters
Verde Watershed		
Apache Creek headwaters - Walnut Creek	AZ15060201-019	Yes: Insufficient monitoring
Beaver Creek Dry Beaver Creek - Verde River	AZ15060202-002	Yes: Turbidity/suspended sediment concentration, missing core parameters
Bitter Creek Jerome WWTP - 2.5 miles below wastewater treatment plant	AZ15060202-066B	Yes: Insufficient monitoring
Bitter Creek, unnamed tributary of headwaters - Bitter Creek	AZ15060202-868	Yes: Cadmium, copper, pH (low), zinc, insufficient monitoring
Camp Creek headwaters - Verde River	AZ15060203-031	Yes: Insufficient monitoring
Colony Wash headwaters - Fort McDowell Indian Reservation	AZ15060203-998	Yes: Insufficient monitoring
East Verde River headwaters - Ellison Creek	AZ15060203-022A	Yes: Turbidity/suspended sediment concentration, insufficient monitoring
Ellison Creek headwaters - East Verde River	AZ15060203-459	Yes: Insufficient monitoring
Fossil Creek headwaters - Verde River	AZ15060203-024	Yes: Insufficient monitoring
Fountain Lake	AZL15060203-0003	Yes: Insufficient monitoring

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern	
Green Valley Lake	AZL15060203-0015	Yes:	Insufficient monitoring
Horseshoe Reservoir	AZL15060203-0620	Yes:	Turbidity, missing core parameters
Munds Creek headwaters - Oak Creek	AZ15060202-415	Yes:	Missing core parameters, insufficient seasonal coverage
Oak Creek headwaters - West Fork Oak Creek	AZ15060202-019	Yes:	Turbidity/suspended sediment concentration, missing core parameters
Oak Creek Dry Creek - Spring Creek	AZ15060202-017	Yes:	Insufficient monitoring
Oak Creek Spring Creek - Verde River	AZ15060202-016	Yes:	Insufficient monitoring
Oak Creek, West Fork headwaters - Oak Creek	AZ15060202-020	Yes:	Insufficient monitoring
Perkins Tank	AZL15060202-1080	Yes:	Dissolved oxygen, turbidity, insufficient monitoring
Pine Creek headwaters - unnamed tributary at 34 21 51 / 111 26 46	AZ15060203-049A	Yes:	Insufficient monitoring
Pine Creek unnamed tributary at 34 21 51 / 111 26 46 - East Verde River	AZ15060203-049B	Yes:	Insufficient monitoring
Roundtree Canyon Creek headwaters - Tangle Creek	AZ15060203-853	Yes:	Insufficient monitoring
Scholze Lake	AZL15060202-1350	Yes:	Dissolved oxygen, lead, nitrogen, turbidity, missing core parameters
Spring Creek Coffee Creek - Oak Creek	AZ15060202-022	Yes:	Insufficient monitoring
Stehr Lake	AZL15060203-1480	Yes:	Insufficient monitoring
Sullivan Lake	AZL15060202-3370	Yes:	pH (high), insufficient monitoring
Sycamore Creek Cedar Creek - Verde River	AZ15060202-026	Yes:	Insufficient monitoring
Sycamore Creek headwaters - Verde River	AZ15060203-055	Yes:	Insufficient monitoring
Verde River Granite Creek - Hell Canyon	AZ15060202-052	Yes:	Insufficient monitoring
Verde River Hell Canyon - unnamed reach number 15060202-065	AZ15060202-038	Yes:	Insufficient monitoring
Verde River Sycamore Creek - Salt River	AZ15060203-001	Yes:	Insufficient monitoring events

Surface Water	Reach or Lake Number	On the 2004 Planning List Pollutants or Parameters of Concern
Webber Creek headwaters - East Verde River	AZ15060203-058	Yes: Insufficient monitoring
West Clear Creek Meadow Canyon - Verde River	AZ15060203-026B	Yes: Missing core parameters
Wet Beaver Creek Long Canyon - Rarick Canyon	AZ15060202-004	Yes: Missing core parameters
Wet Beaver Creek Rarick Canyon - Dry Beaver Creek	AZ15060202-003	Yes: Insufficient monitoring
Wet Bottom Creek headwaters - Verde River	AZ15060203-020	Yes: Insufficient monitoring

Table 28. Category 2 -- Attaining Some Uses

At least One Designated Use Assessed as "Attaining" and All Others are "Inconclusive"
All Waters are On the Planning List for Follow Up Monitoring

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern	
Bill Williams Watershed			
Big Sandy River Sycamore Creek - Burro Creek	AZ15030201-004	Yes:	Selenium
Bill Williams River Point B - Colorado River	AZ15030204-001	Yes:	Turbidity/suspended sediment concentration, missing core parameters
Boulder Creek Copper Creek - Burro Creek	AZ15030202-005B	Yes:	Mercury, selenium, missing core parameters
Burro Creek Francis Creek - Boulder Creek	AZ15030202-008	Yes:	Copper, mercury, missing core parameters
Santa Maria River Bridle Wash - Date Creek	AZ15030203-009	Yes:	*Escherichia coli*
Colorado - Grand Canyon Watershed			
Colorado River Lake Powell - Paria River	AZ14070006-001	Yes:	Missing core parameters
Dogtown Reservoir	AZL15010004-0480	Yes:	Selenium, dissolved oxygen, pH (high), turbidity, missing core parameters
Colorado - Lower Gila Watershed			
Colorado River Bill Williams River - Osborne Wash	AZ15030104-020	Yes:	Selenium
Colorado River Indian Wash - Imperial Dam	AZ15030104-001	Yes:	Suspended sediment concentration
Colorado River Main Canal - Mexico border	AZ15030107-001	Yes:	Suspended sediment concentration, DDE, dieldrin, selenium
Lake Havasu	AZL15030101-0590A	Yes:	Mercury, selenium, *Escherichia coli*
Little Colorado - San Juan Watershed			
Ashurst Lake	AZL15020015-0090	Yes:	Turbidity, missing core parameters
Barbershop Canyon Creek headwaters - East Clear Creek	AZ15020008-537	Yes:	Missing core parameter
Billy Creek headwaters - Show Low Creek	AZ15020005-019	Yes:	Turbidity/suspended sediment concentration, *Escherichia coli*, missing core parameter
Blue Ridge Reservoir	AZL15020008-0200	Yes:	Dissolved oxygen, missing core parameters

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern
Chevelon Creek Black Canyon - Little Colorado River	AZ15020010-001	Yes: Turbidity/suspended sediment concentration
Clear Creek Reservoir	AZL15020008-0340	Yes: Dissolved oxygen, missing core parameters
Colter Creek headwaters - Nutrioso Creek	AZ15020001-293	Yes: Missing core parameter
East Clear Creek headwaters - Yeager Canyon	AZ15020008-009	Yes: Dissolved oxygen, missing core parameter
Kinnikinick Lake	AZL15020015-0730	Yes: Turbidity/suspended sediment concentration, selenium, missing core parameters
Lee Valley Reservoir	AZL15020001-0770	Yes: Missing core parameters
Little Colorado River, East Fork headwaters - Hall Creek	AZ15020001-230	Yes: Missing core parameters
Little Colorado River, West Fork headwaters - Government Springs	AZ15020001-013A	Yes: Missing core parameters
Little Colorado River, West Fork Government Springs - Little Colorado River	AZ15020001-013B	Yes: Copper, missing core parameters
Mineral Creek headwaters - Concho Creek	AZ15020002-648	Yes: Dissolved oxygen, missing core parameter
Rio de Flag Flagstaff WWTP - San Francisco Wash	AZ15020015-004B	Yes: Turbidity/suspended sediment concentration
Show Low Creek headwaters - Linden Wash	AZ15020005-012	Yes: Turbidity/suspended sediment concentration
Silver Creek headwaters - Show Low Creek	AZ15020005-013	Yes: Dissolved oxygen, turbidity/suspended sediment concentration, missing core parameter
Woods Canyon Lake	AZL15020010-1700	Yes: Missing core parameters
Middle Gila Watershed		
Gila River San Pedro River - Mineral Creek	AZ15050100-008	Yes: Turbidity/suspended sediment concentration
Hassayampa River Copper Creek - Blind Indian Creek	AZ15070103-007B	Yes: *Escherichia coli*, cadmium
Hassayampa River Sols Wash - 8 miles below Wickenburg	AZ15070103-002A	Yes: *Escherichia coli*
Lake Pleasant	AZL15070102-1100	Yes: Ammonia, selenium, missing core parameter
Lynx Lake	AZL15070102-0860	Yes: Lead, manganese, missing core parameters
Papago Park Ponds	AZL15060106B-1030	Yes: Missing core parameters

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern	
Salt River Watershed			
Apache Lake	AZL15060106A-0070	Yes:	Dissolved oxygen, missing core parameters
Bear Wallow Creek North and South Forks - Black River	AZ15060101-023	Yes:	Missing core parameters
Beaver Creek headwaters - Black River	AZ15060101-008	Yes:	Turbidity/suspended sediment concentration, missing core parameter
Big Lake	AZL15060101-0160	Yes:	Dissolved oxygen, missing core parameters
Black River Beaver Creek - Reservation Creek	AZ15060101-007	Yes:	Missing core parameters
Black River, East Fork headwaters - Black River	AZ15060101-009	Yes:	Missing core parameter
Black River, West Fork headwaters - Black River East Fork	AZ15060101-048	Yes:	Missing core parameters
Canyon Creek headwaters - White Mountain Apache Reservation	AZ15060103-014	Yes:	Fish kill due to fire (2002)
Fish Creek headwaters - Black River	AZ15060101-032	Yes:	Copper, missing core parameters
Roosevelt Lake	AZL15060103-1240	Yes:	Turbidity/suspended sediment concentration, missing core parameters
Rye Creek headwaters - Tonto Creek	AZ15060105-014	Yes:	Missing core parameter
Saguaro Lake	AZL15060106A-1290	Yes:	Missing core parameters
Salt River Pinal Creek - Roosevelt Lake	AZ15060103-004	Yes:	*Escherichia coli*, total nitrogen, turbidity/suspended sediment concentration
Spring Creek headwaters - Tonto Creek	AZ15060105-010	Yes:	Missing core parameter
San Pedro - Willcox Playa - Rio Yaqui Watershed			
Copper Creek headwaters - Prospect Canyon	AZ15050203-022A	Yes:	Selenium
Double R Canyon Creek headwaters - Bass Canyon Creek	AZ15050203-902	Yes:	Missing core parameter
Ramsey Canyon Creek headwaters - Forest Road 110	AZ15050202-404A	Yes:	Missing core parameter
San Pedro River Charleston - Walnut Gulch	AZ15050202-006	Yes:	Turbidity/suspended sediment concentration

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern
San Pedro River Hot Springs Creek - Redfield Canyon	AZ15050203-011	Yes: *Escherichia coli*, turbidity/suspended sediment concentration
Whitewater Draw Unnamed trib. at 31 20 36 / 109 34 46 - Mexico border	AZ15080301-002B	Yes: Lead, missing core parameters
Santa Cruz - Rio Magdalena - Rio Sonoyta		
Cienega Creek headwaters - Gardner Canyon	AZ15050302-006A	Yes: Missing core parameter
Cienega Creek Gardner Canyon - USGS gage (Pantano Wash)	AZ15050302-006B	Yes: Missing core parameter
Kennedy Lake	AZL15050301-0720	Yes: Missing core parameters
Patagonia Lake	AZL15050301-1050	Yes: Missing core parameters
Sabino Canyon Creek tributary at 32 23 28 / 110 47 00 - Tanque Verde Wash	AZ15050302-014B	Yes: Missing core parameters
Santa Cruz River Nogales WWTP - Josephine Canyon	AZ15050301-009	Yes: Missing core parameters
Santa Cruz River Josephine Canyon - Tubac Bridge	AZ15050301-008A	Yes: Turbidity/suspended sediment concentration, chlorine, missing core parameters
Santa Cruz River Tubac Bridge - Sopori Wash	AZ15050301-008B	Yes: Missing core parameters
Santa Cruz River Canada del Oro - HUC boundary 15050303	AZ15050301-001	Yes: Chlorine
Upper Gila Watershed		
Ash Creek tributary at 32 45 37 / 109 52 22 - Gila River	AZ15040005-040B	Yes: Missing core parameters
Blue River New Mexico border - KP Creek	AZ15040004-026	Yes: Missing core parameters
Blue River KP Creek - Strayhorse Creek	AZ15040004-025A	Yes: Missing core parameters
Campbell Blue Creek headwaters - Blue River	AZ15040004-028	Yes: Missing core parameter
Cave Creek South Fork of Cave Creek - USFS boundary	AZ15040006-852B	Yes: Turbidity/suspended sediment concentration
Cave Creek, South Fork headwaters - Cave Creek	AZ15040006-849	Yes: *Escherichia coli*
Dankworth Ponds	AZL15040005-0440	Yes: Selenium, turbidity, missing core parameters

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern
Eagle Creek headwaters - unnamed tributary at 33 23 24 / 109 29 35	AZ15040005-028A	Yes: Missing core parameters
Frye Canyon Creek headwaters - Frey Mesa Reservoir	AZ15040005-988A	Yes: Missing core parameters
Gila River New Mexico border - Bitter Creek	AZ15040002-004	Yes: Selenium
KP Creek headwaters - Blue River	AZ15040004-029	Yes: Missing core parameters
Roper Lake	AZL15040005-1250	Yes: Missing core parameter
San Francisco River New Mexico border - Blue River	AZ15040004-004	Yes: Turbidity/suspended sediment concentration
San Francisco River Blue River - Limestone Gulch	AZ15040004-003	Yes: *Escherichia coli*
San Francisco River Limestone Gulch - Gila River	AZ15040004-001	Yes: Turbidity/suspended sediment concentration, copper, *Escherichia coli*
Verde Watershed		
Bartlett Lake	AZL15060203-0110	Yes: Missing core parameters
Granite Basin Lake	AZL15060201-0580	Yes: pH, ammonia, missing core parameters
East Verde River American Gulch - Verde River	AZ15060203-022C	Yes: Boron
J.D. Dam Lake	AZ15060202-0700	Yes: pH (low), missing core parameters
Pumphouse Wash headwaters - Oak Creek	AZ15060202-442	Yes: Missing core parameters
Verde River Sycamore Creek - Oak Creek	AZ15060202-025	Yes: Mercury, *Escherichia coli*
Verde River HUC boundary 15060203 - West Clear Creek	AZ15060203-027	Yes: *Escherichia coli*, missing core parameters
Verde River Tangle Creek - Ister Flat	AZ15060203-018	Yes: Turbidity/SSC, *Escherichia coli*
Verde River Horseshoe Dam - Alder Creek	AZ15060203-008	Yes: Missing core parameters
Verde River Camp Creek - Sycamore Creek	AZ15060203-003	Yes: Missing core parameters

Table 29. Category 1 -- Attaining All Uses

All Designated Uses are Assessed as "Attaining"

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern
Bill Williams Watershed		
Trout Creek Cow Creek - Knight Creek	AZ15030201-014	No
Colorado - Grand Canyon Watershed (no Category 1 waters)		
Colorado - Lower Gila Watershed (no Category 1 waters)		
Little Colorado - San Juan Watershed (no Category 1 waters)		
Middle Gila Watershed		
Agua Fria River Sycamore Creek - Big Bug Creek	AZ15070102-023	No
Agua Fria River Little Squaw Creek - Cottonwood Creek	AZ15070102-017	No
Arnett Creek headwaters - Queen Creek	AZ15050100-1818	No
Cave Creek headwaters - Cave Creek Dam	AZ15060106B-026A	No
Hassayampa River Cottonwood Creek - Martinez Wash	AZ15070103-004	No
Sycamore Creek Tank Canyon - Agua Fria River	AZ15070102-024B	No
Tempe Town Lake	AZL15060106B-1588	No
Salt River Watershed		
Campaign Creek headwaters - Pinto Creek	AZ15060103-037	No
Cherry Creek tributary at 34 05 09 / 110 56 04 - Salt River	AZ15060103-015B	No
Coon Creek unnamed tributary at 33 46 42 / 110 54 25 - Salt River	AZ15060103-039B	No
Deer Creek headwaters - Rye Creek	AZ15060105-018	No
Greenback Creek headwaters - Tonto Creek	AZ15060105-005	No

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern
Haigler Creek headwaters - unnamed reach at 34 12 23.1 / 111 00 11	AZ15060105-012A	No
Haunted Canyon headwaters - Pinto Creek	AZ15060103-879	No
Pinal Creek Jesse Lane - Salt River	AZ15060103-280D	No
Tonto Creek Rye Creek - Gun Creek	AZ15060105-008	No
San Pedro - Willcox Playa - Rio Yaqui Watershed		
Aravaipa Creek Stowe Gulch - Wilderness Area	AZ15050203-004B	No
Bass Canyon Creek tributary at 32 26 06 / 110 1318 - Hot Springs Canyon Creek	AZ15050203-899B	No
Buehman Canyon headwaters - end of Unique Waters	AZ15050203-010A	No
Hot Springs Canyon Creek headwaters - San Pedro River	AZ15050203-013	No
Rucker Canyon Creek headwaters - Whitewater Draw	AZ15080301-288	No
Santa Cruz - Rio Magdalena - Rio Sonoyta		
Redrock Canyon Creek headwaters - Harshaw Creek	AZ15050301-576	No
Santa Cruz River headwaters - Mexico border	AZ15050301-268	No
Upper Gila Watershed		
Blue River Strayhorse Creek - San Francisco River	AZ15040004-025B	No
Bonita Creek Park Creek - Gila River	AZ15040005-030	No
Eagle Creek Willow Creek - Sheep Wash	AZ15040005-027	No
Eagle Creek Sheep Wash - Gila River	AZ15040005-025	No

Surface Water	Reach or Lake Number	On 2004 Planning List Pollutants or Parameters of Concern
Verde Watershed		
Oak Creek Below Slide Rock State Park - Dry Creek	AZ15060202-018C	No
Verde River Unnamed reach 15060202-065 - Railroad Draw	AZ15060202-037	No

This reach of Trout Creek, near Wikieup, Arizona, was placed in Category 1 because it is attaining all designated uses.

What is Arizona removing from its 2002 303(d) List?

The parameters of concern being removed from the 2002 303(d) List and the reason for their removal were detailed in the assessment tables in Chapter IV. The following list (Table 30) provides a delist summary, showing a total of 58 parameters delisted from 31 streams and three lakes. Most of these changes were due to completion of a TMDL (23 parameters) or due to a change in water quality standards (25 parameters).

At least one of the following criteria for delisting a pollutant or reach is shown in **Table 30**, as established in the Impaired Water Identification Rule (Appendix B) (R18-11-605.E.2 and R18-11-604.B):

Criteria Number

1. EPA-approved TMDL has been developed for the pollutant.
2. New data indicate that the water quality standard is being met.
3. Change in the standard or designated use has resulted in the water quality standard no longer being exceeded.
4. Reevaluation of the assessment information indicates an error or deficiency in the original analysis resulted in an inappropriate listing.
5. Pollutant loadings from naturally occurring conditions alone are sufficient to cause a violation of the water quality standard.
6. Reach is split and no current or historic data exist in this portion of the reach that would support a listing.

Table 30. Pollutants and surface waters removed from 2002 303(d) List

Surface Water	Reach or Lake Number	Pollutant of Concern Removed From List	Criteria For Delist	Delist Surface Water
Bill Williams Watershed				
Alamo Lake	AZL15030204-0040	Low dissolved oxygen	2 - Current data indicates uses are being attained.	No. Remains on list due to ammonia, mercury in fish tissue, and high pH.
		Sulfide	3 - Change in standard. Data shows that new standard is attained.	
Boulder Creek unnamed wash at 34 41 14 / 113 03 34 - Wilder Creek	AZ15030202-006B	Fluoride	3 - Change in standard. Data shows that new standard is attained.	No. Remains on list due to mercury.
Colorado - Grand Canyon Watershed				
Colorado River Parashant - Diamond Creek	AZ15010002-003	Turbidity	3 - Change in standard. Moved to the Planning List.	No. Remains on the list due to selenium and suspended sediment concentration.
Virgin River Beaver Dam Wash - Big Bend Wash	AZ15010010-003	Fecal coliform	3 - Change in standard. *Escherichia coli* standard is being attained.	No. Remains on the list due to selenium and suspended sediment concentration.
		Turbidity	3 - Change in standard. Moved to the Planning List.	
Colorado - Lower Gila Watershed				
Painted Rock Borrow Pit Lake	AZ15070201-1010	Fecal coliform	3 - Change in standard. Moved to the Planning List for *Escherichia coli* monitoring (new standard).	No. Remains on list due to fish consumption advisory (DDT metabolites, toxaphene and chlordane in fish), and low dissolved oxygen.

Surface Water	Reach or Lake Number	Pollutant of Concern Removed From List	Criteria For Delist	Delist Surface Water
Little Colorado - San Juan Watershed				
Little Colorado River Water Canyon Creek - Nutrioso Creek	AZ15020001-010	Turbidity	1 - TMDL approved in 2002. Moved to the Planning List.	Yes.
Little Colorado River Nutrioso Creek - Carnero Wash	AZ15020001-009	Turbidity	1 - TMDL approved in 2002. Moved to the Planning List.	Yes.
Middle Gila Watershed				
French Gulch headwaters - Hassayampa River	AZ15070103-239	Manganese	3 - Change in standard. Data shows that new standard is attained.	No. Remains on list due to cadmium, copper and zinc.
Gila River Centennial Wash - Gillespie Dam	AZ15070101-008	Turbidity	3 - Change in standard. Moved to the Planning List.	No. Remains on list due to fish consumption advisory (DDT metabolites, toxaphene and chlordane in fish), boron, and selenium.
Hassayampa River headwaters - Copper Creek	AZ15070103-007A	Zinc	1 - TMDLs for cadmium, copper, and zinc approved in 2002. (Cadmium and copper were delisted in 2002; however, TMDLs had already been drafted.) Moved to the Planning list.	Yes.
Mineral Creek Devils Canyon - Gila River	AZ15050100-012B	Beryllium	3 - Change in standard. Data shows that new standard is attained.	No. Remains on list due to copper and selenium.
		pH	2 - Current data indicates uses are being attained. (Remediation activities removing contaminants.)	
		Zinc	2 - Current data indicates uses are being attained. (Remediation activities removing contaminants.)	
Turkey Creek headwaters - tributary at 34 19 28 / 112 21 28	AZ15070102-036A	Cadmium	6 - Reach was split in 2002 due to changes in designated uses at 5000-foot elevation. All exceedances that resulted in a listing occurred in the lower reach (AZ15070102-036B).	Yes.
		Copper		
		Zinc		
Salt River Watershed				
Christopher Creek headwaters - Tonto Creek	AZ15060105-353	Turbidity	3 - Change in standard. Moved to Planning List.	No. Remains on list due to *Escherichia coli*.
Tonto Creek headwaters - unnamed tributary at 34 18 10 / 111 04 14	AZ15060105-013A	Turbidity	3 - Change in standard. Moved to Planning List.	Yes.
Tonto Creek unnamed tributary at 34 18 10 / 111 04 14 - Haigler Creek	AZ15060105-013B	Turbidity	3 - Change in standard. Moved to Planning List.	Yes.
Tonto Creek Rye Creek - Gun Creek	AZ15060105-008	Turbidity	3 - Change in standard 2 - Current data shows no exceedances in 18 samples.	Yes.

Surface Water	Reach or Lake Number	Pollutant of Concern Removed From List	Criteria For Delist	Delist Surface Water
San Pedro - Willcox Playa - Rio Yaqui Watershed				
Mule Gulch headwaters - above Lavender Pit	AZ15080301-090A	pH	2. Current data shows low pH in only 1 of 10 samples, and no zinc exceedances in 15 samples.	No. Remains on the list due to copper.
		Zinc		
Santa Cruz - Rio Magdalena - Rio Sonoyta				
Alum Gulch headwaters - 31 28 20 / 110 43 51	AZ15050301-561A	Cadmium	1 - TMDLs approved in 2003. Moved to the Planning List.	Yes.
		Copper		
		pH		
		Zinc		
Alum Gulch 31 28 20 / 110 43 51 - 31 29 17 / 110 44 25	AZ15050301-561B	Cadmium	1 - TMDLs approved in 2003. Moved to the Planning List.	Yes.
		Copper		
		pH		
		Zinc		
Harshaw Creek headwaters - Sonoita Creek	AZ15050301-025	Zinc	3 - Designated use changed from A&Ww to A&We. Zinc data meet new ephemeral standards.	Yes.
Nogales and East Nogales Washes Mexico border - Potrero Creek	AZ15050301-011	Fecal coliform	2 - Change in standard. Now listed due to *Escherichia coli* exceedances.	No. Remains on list due to ammonia, chlorine, copper, and *Eshcerichia coli*.
		Turbidity	3 - Change in standard. Moved to Planning List.	
Potrero Creek Interstate 19 - Santa Cruz River	AZ15050301-500B	Fecal coliform	3 - Change in standard. Meeting new *Escherichia coli* standards. (No exceedance in 15 samples.)	Yes.
Santa Cruz River Mexico border - Nogales WWTP	AZ15050301-010	Fecal coliform	3 - Change in standard. Now listed due to *Escherichia coli* exceedances.	No. Remains on list due to *Eshcerichia coli*.
Santa Cruz River Nogales WWTP - Josephine Canyon	AZ15050301-009	Fecal coliform	3 - Change in standard. Meeting new *Escherichia coli* standards. (No exceedance in 15 samples.)	Yes.
Santa Cruz River Josephine Canyon - Tubac Bridge	AZ15050301-008A	Fecal coliform	3 - Change in standard. Meeting new *Escherichia coli* standards. (No exceedance in 16 samples.)	Yes.
		Turbidity	3 - Change in standard. Moved to the Planning List.	
Santa Cruz River Tubac Bridge - Sopori Wash	AZ15050301-008B	Fecal coliform	3 - Change in standard. Meeting new *Escherichia coli* standards. (No exceedance in 17 samples.)	Yes.
Three R Canyon headwaters - 31 28 35 / 110 46 19	AZ15050301-558A	Cadmium	1 - TMDLs approved in 2003. Moved to the Planning List.	Yes.
		Copper		
		pH		

Surface Water	Reach or Lake Number	Pollutant of Concern Removed From List	Criteria For Delist	Delist Surface Water
		Zinc		
Three R Canyon 31 28 35 / 110 46 19 - 31 28 27 / 110 47 12	AZ15050301-558B	Cadmium	1 - TMDLs approved in 2003. Moved to the Planning List.	Yes.
		Copper		
		pH		
		Zinc		
Three R Canyon 31 28 27 / 110 47 12 - Sonoita Creek	AZ15050301-558C	Cadmium	1 - TMDLs approved in 2003. Moved to the Planning List.	Yes.
		Copper		
		pH		
		Zinc		
Upper Gila Watershed				
Gila River Bonita Creek - Yuma Wash	AZ15040005-022	Turbidity	3 - Change in standard. Moved to the Planning List.	No. Remains on list due to *Escherichia coli*.
San Francisco River Limestone Gulch - Gila River	AZ15040004-001	Turbidity	3 - Change in standard. Moved to the Planning List.	Yes.
Verde Watershed				
Beaver Creek Dry Beaver Creek - Verde River	AZ15060202-002	Turbidity	3 - Change in standard. Moved to the Planning List.	Yes.
Granite Basin Lake	AZL15060202-0580	Dissolved oxygen	5 - Low dissolved oxygen due to natural conditions only (lake turnover).	Yes.
Oak Creek Below Slide Rock State Park - Dry Creek	AZ15060202-018B	Turbidity	3 - Designated use changed from A&Wc to A&Ww because reach is below 5000-foot elevation. Current and historic turbidity data would meet former turbidity standard for A&Ww.	Yes.

Which TMDLs will ADEQ do next?

Priority Ranking and Scheduling TMDLs – The Clean Water Act and federal regulations (40 CFR 130.7) require the state to establish a priority ranking for each surface water on the 303(d) List. The criteria for this ranking and which TMDLs will be targeted for initiation within the next two years is established in the Impaired Waters Rule (R18-11-606) (**Appendix B**). Arizona's ranking system reflects the relative value and benefits of each surface water to the state and considers, among other factors:

1. The severity of the impairment in relation to the designated uses, especially threats to human health, aquatic life and wildlife;
2. Surface waters where endangered or threatened species exist and the pollutant is likely to further jeopardize the listed species;
3. Other pertinent information such as: economic or aesthetic importance, the complexity of the TMDL, degree of public interest, permitting issues, an impending change in water quality standard or designated use, and date when the surface water was first placed on the 303(d) List.

Specific factors considered in prioritizing and scheduling impaired surface waters for TMDL development are listed as footnotes at the end of **Table 31**. As a surface water may have a mixture of high, medium, and low priority factors, the final priority ranking considers all factors but weighs some factors more heavily than others. The TMDL schedule in **Table 31** also indicates which factors were applied, which were weighed more heavily, and a brief discussion of the final priority ranking determination.

In general, the surface water was automatically listed as high priority, and ADEQ will initiate development of the associated TMDL within two years following EPA's approval of the 303(d) List, if there is a substantial threat to health and safety of humans, aquatic life, or wildlife. This determination was based on the following four factors:

1. The magnitude of the exceedance. For example, the laboratory result was more than twice the standard.
2. The duration or persistence of the problem. For example, more than half the samples exceeded standards.
3. The standard was established to protect human health or wildlife from imminent harm. For example, the acute toxic Aquatic and Wildlife standards were established based on short-term exposures rather than long-term or life-time exposures.
4. A Threatened or Endangered species may be further jeopardized by the water quality problem. This was determined by using the following information provided by the Arizona Game and Fish Department and the US Fish and Wildlife Service:
    - A federally-protected Threatened or Endangered species has been confirmed within a mile of the surface water listed or the surface water is within "critical habitat" established for the species;
    - A standard to protect aquatic and wildlife has been exceeded; and
    - Published reasons for decline and vulnerability of the species or other published reports indicate that the pollutant or source of the exceedance may further jeopardize this species.

Some low priority factors take precedence over high priority factors when completing a TMDL at this time would either not be appropriate, be premature, or be an inefficient use of resources. These factors included:

1. ADEQ has formally submitted to EPA a proposal to delist the surface water or pollutant.
2. ADEQ has adopted a new surface water quality standard or designated use that is currently being reviewed by EPA for approval. When approved, the standard would no longer be violated.
3. The surface water is expected to attain surface water quality standards before the next listing cycle due to:
    - Recently instituted treatment levels or best management practices in the drainage area,
    - Discharges or activities related to the impairment have ceased, or
    - Actions have been taken and the controls are in place or firmly scheduled for implementation that are likely to bring the surface water back into compliance.
4. The water quality problem can be resolved only through the cooperative actions of an agency outside the state or federal jurisdiction (e.g., Mexico, another state, or Indian reservation).

EPA may also revise this schedule during its review process. Or it may become necessary to shift priority ranking of a surface water due to significant changes in resources to complete TMDLs or new information obtained concerning one of the priority factors. Such changes would be negotiated with EPA and would be made known to the public through the TMDL status page on ADEQ's web site: www.azdeq.gov.

Table 31. TMDL priority ranking and schedule
for ADEQ 303(d) listings (see EPA listings in Table 32 to follow)
(See key to priority factors on p. 46)

Surface Water Identification	Pollutant	Year First Listed	H1*	H2	H3	H4*	H5	H6	H7	H8	M1	M2	M3	M4	M5	M6	L1*	L2*	L3*	L4	L5	L6	L7*	L8	L9	RANKING	TIME TABLE **
Bill Williams Watershed																											
Alamo Lake 1,414 acres AZL15030204-0040	Mercury (in fish tissue)	1998 (2002 EPA)	**H1**			**H4**			**H7**						M5	M6						L6				High priority	Initiated monitoring and investigation in 2003. Initiate TMDL in 2004. Complete TMDL in 2005.
			Excess mercury in fish tissue can be toxic to humans and other animals that eat the fish (H1). Fish in this lake are a food source for the bald eagle (a species federally-listed as Threatened) (H4) and the lake supports significant sport fishing (H7). ADEQ will be coordinating research for potential mercury sources for the five mercury listings in this watershed as they may have common sources (M5, M6). Currently there is insufficient data to determine sources or critical conditions (L6).																								
	Ammonia	2004							H7							M6						L6				Medium priority	Ongoing monitoring by US Fish and Wildlife Service. Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
	pH	1996							H7		M1					M6										Medium priority	
			ADEQ is currently establishing criteria to classify its lakes which may result in changes in assessment status (M6). Classification is to be completed by 2004. High ammonia and pH levels may indicate eutrophication problems that may lead to fish kills at this popular fishing area (H7). The elevated ammonia and pH should not negatively impact the bald eagles located near this lake (a species that is federally-listed as Threatened). More investigation is needed to determine the source of the pollutants (L6). Although ammonia could pose a significant threat to aquatic life due to its toxic nature, the chronic ammonia standard was exceeded in only 2 of 36 sampling events. The pH level exceeds standard for A&Ww, FBC, and AgL (M1).																								
Colorado-Grand Canyon Watershed																											
Colorado River Parashant Canyon - Diamond Creek 28 miles AZ15010002-003	Selenium	2004													M5							L6		L8		Low priority	Ongoing fixed station monitoring by USGS. Initiate monitoring and investigation in 2010. Initiate TMDL in 2011. Complete TMDL in 2012.
	Suspended Sediment Concentration	2004													M5							L6		L8		Low priority	
			Prior monitoring and investigations should help support TMDL development; however, further investigation is needed to determine source loadings, especially contributions from natural background (L6, L8). Source contributions from Utah, Colorado, and other upstream states may make completion of this TMDL more complex (M5). Two federally protected species occur in this area, the humpback chub and razorback sucker, but should not be negatively impacted by the suspended sediment or relatively low levels of selenium.																								
Paria River Utah border - Colorado River 29 miles AZ14070007-123	Suspended Sediment Concentration	2004													M5							L6		L8		Low priority	Initiate monitoring and investigation in 2010. Initiate TMDL in 2011. Complete TMDL in 2012.
			Prior monitoring and investigations in this drainage should help support TMDL development (M6); however, further investigation is needed to determine source loadings, especially contributions from natural background (L6, L8). Source contributions from Utah may make completion of this TMDL more complex (M5).																								
Virgin River Beaver Dam Wash - Big Bend Wash 10 miles AZ15010010-003	Selenium	2004													M5	**M6**						L6		L8		Medium priority	Ongoing fixed station monitoring by USGS. Initiate monitoring and investigation in 2009. Initiate TMDL in 2010. Complete TMDL in 2011.
	Suspended Sediment Concentration	2004													M5	M6						L6		L8		Medium priority	
			Prior monitoring in this drainage should help support TMDL development (M6); however, further investigation is needed to determine source loadings, especially contributions from natural background (L6, L8). Source contributions from Utah may make completion of this TMDL more complex (M5). Federally protected Virgin River chub and woundfin occur in this area, but should not be negatively impacted by the elevated selenium and suspended sediment concentrations. For efficiency, the development of selenium TMDLs in the Colorado River and the Virgin River will be coordinated (M6).																								

Surface Water Identification	Pollutant	Year First Listed	H 1 *	H 2	H 3	H 4 *	H 5	H 6	H 7	H 8	M 1	M 2	M 3	M 4	M 5	M 6	L 1 *	L 2 *	L 3 *	L 4	L 5	L 6	L 7 *	L 8	L 9	RANKING	TIME TABLE **
Colorado-Lower Gila Watershed																											
Colorado River Hoover Dam - Lake Mohave 40 miles AZ15030101-015	Selenium	2004				**H 4**									M 5	M 6						L 6		L 8		High priority	Ongoing fixed station monitoring by USGS. Initiate monitoring and investigation in 2009. Initiate TMDL in 2010. Complete TMDL in 2011.
			The federally protected Yuma clapper rail occurs in this area and could be negatively impacted by elevated lead or selenium (H4). Prior monitoring in this drainage should help support TMDL development (M6); however, further investigation is needed to determine source loadings, especially contributions from natural background (L6, L8). Note that significant selenium loadings may be contributed from upstream sources in Utah and Colorado and may make completion of the TMDL more complex (M5).																						
Gila River Coyote Wash - Fortuna Wash 28 miles AZ15070201-003	Boron	2004							H 7						M 5	M 6					L 5	L 6				High priority	Ongoing fixed station monitoring. Initiate monitoring and investigation in 2006. Initiate TMDLs in 2007. Complete TMDLs in 2008.
	Selenium	2004				**H 4**									M 5	M 6						L 6					
			The federally protected Yuma clapper rail have been found in this surface water and could be negatively impacted by elevated selenium (H4). Elevated selenium and boron may be associated with the extensive agriculture in the area; however, TMDL may be complex due to large number of potential sources and potential seasonal influences (M3, M5, L6). Boron concentrations found may impact downstream agricultural uses (H7) but present a low ecological and human health risk (L5). Coordinate TMDL investigations with boron and selenium investigation upstream, from Centennial Wash to Gillespie Dam (M6).																						
Painted Rocks Borrow Pit Lake 180 acres AZL15070201-1010	Low dissolved oxygen	1992																		L 4	L 5			L 8		Low priority	Lakes classification study will be completed in 2004 and will determine need for TMDL.
			A 1992 diagnostic feasibility study by ADEQ suggested the causes of low dissolved oxygen were due to design and maintenance problems on this shallow lake and suggested strategies to improve water quality. Drought conditions have reduced lake levels and may be related to some of the low dissolved oxygen readings (L8). During the past year, the lake has been dry and representative water samples at the lake could not be collected (L4). The lake is no longer being stocked with fish and does not have recreational uses because of historic pesticide contamination and fish consumption advisories (L5).																						
	DDT metabolites, toxaphene, chlordane in fish tissue	1988 (EPA 2002)	**H 1**			**H 4**									M 5	M 6						L 6				High priority	Initiate monitoring and investigation in 2008. Initiate TMDLs in 2009. Complete TMDLs in 2010.
			The federally protected Yuma clapper rail occurs in this area and could be negatively impacted by pesticides (H4). There is no public access, thus the public health risk due to fish tissue contamination is significantly reduced; however, these pesticides still present a high risk to aquatic life and species that prey on them (H1). The TMDLs will be complex due to the size of the drainage and potential sources (M5) and will require significant monitoring resources to determine the sources of this historic pesticide (L6). TMDLs will be coordinated with related pesticide TMDLs in the Middle Gila (M6).																						
Little Colorado-San Juan Watershed																											
Little Colorado River Silver Creek - Carr Wash 6 miles AZ15020002-004	*Escherichia coli*	2004	H 1										M 3		M 5	M 6						L 6				Medium priority	Initiate monitoring and investigation in 2005. Initiate TMDL in 2006. Complete TMDL in 2007.
			Exceedances of the *Escherichia coli* standard may represent a significant public health concern if people are swimming or even wading in the water (H1). Exceedances may be related to wet weather events (M3). The drainage area is more than 8,000 square miles so determining the source of contamination may be complex and will require substantial monitoring data to identify sources (M5, L6). ADEQ will initiate this monitoring while it collects data for other TMDLs along the Little Colorado River (M6).																						
Little Colorado River Porter Tank Draw - McDonalds Wash 17 miles AZ15020008-017	Copper	1992	**H 1**			**H 4**									M 5							L 6		L 8		High priority	Initiate monitoring and investigation in 2005. Initiate TMDL in 2007. Complete TMDL in 2009.
	Silver	1992	**H 1**			**H 4**									M 5							L 6		L 8			

Surface Water Identification	Pollutant	Year First Listed	H1 *	H2	H3	H4 *	H5	H6	H7	H8	M1	M2	M3	M4	M5	M6	L1 *	L2 *	L3 *	L4	L5	L6	L7 *	L8	L9	RANKING	TIME TABLE **
	Suspended Sediment Concentration	2004													M 5							L 6				Medium priority	Initiate monitoring and investigation in 2005. Initiate TMDL in 2007. Complete TMDL in 2009.
			Copper and silver TMDLs are a high priority due to the toxic nature of these heavy metals and the frequency of exceedances (9 out of 11 samples exceeded the copper standard, and 2 out of 9 samples exceeded the silver standard) (H1). Little Colorado spinedace, federally protected as a Threatened species, occurs in this reach and may be negatively impacted by the copper and silver (H4), but should not be negatively impacted by the suspended sediment concentration. Data from a USGS study concluded that the metals may be naturally elevated (L8); however, sources and natural loading concentrations need to be further studied (L6). The nature of these pollutants make this study very complex (M5). The current sampling plan for copper and silver will be updated to include SSC.																								
Lake Mary (lower) 660 acres AZL15020015-0890 Lake Mary (upper) 760 acres AZL15020015-0900	Mercury (in fish tissue)	2002 (EPA)	**H 1**						**H 7**						M 5	M 6						L 6				High priority	ADEQ initiated TMDL monitoring and investigation in 2003. Initiate TMDL in 2005. Complete TMDL in 2006.
			Fish consumption advisory has been issued. Excess mercury in fish tissue can be toxic to humans and other animals that eat the fish (H1). Normally the lake is a significant public recreational area (H7); however, due to a long drought, the lake has been dry at times during the past year. Intermittent stream flow and drought conditions have slowed collection of adequate data to determine source loadings (L6). Excessive mercury in fish tissue has been found in numerous regional lakes. Because the extent of impairment and sources of loading have not been determined, and may have natural and/or airborne sources, this TMDL is complex and a high priority (M5, M6, L8).																								
Middle Gila Watershed																											
Alvord Park Lake 27 acres AZL15060106B-0050	Ammonia	2004	**H 1**						**H 7**							M 6						L 6				High priority	Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
			Ammonia poses a significant threat to aquatic life due to its toxic nature (H1). This lake is an important urban recreational area (H7). More investigation is needed to determine the source of the pollutants (L6). ADEQ is currently establishing criteria to classify its lakes which may result in changes in assessment status (M6).																								
Chaparral Lake 13 acres AZL15060106B-0300	Low dissolved oxygen	2004							H 7							**M 6**						L 6				Medium priority	Initiate monitoring and investigations in 2007. Initiate TMDLs in 2008. Complete TMDLs in 2009.
	Escherichia coli	2004							H 7							**M 6**						L 6				Medium priority	
			Although exceedances of *Escherichia coli* standards represent a risk to public health, swimming or wading in the lake is prohibited. Low dissolved oxygen, which may result in fish kills, would be detrimental to this important urban recreational area (H7). More investigation is needed to identify the sources loadings (L6). Both TMDLs in this lake will be developed at the same time for efficiency (M6). ADEQ is currently establishing criteria to classify its lakes which may result in changes in assessment status (M6).																								
Cortez Park Lake 2 acres AZL15060106B-0410	Low dissolved oxygen	2004							H 7		M 1					**M 6**						L 6				Medium priority	Initiate monitoring and investigations in 2007. Initiate TMDLs in 2008. Complete TMDLs in 2009.
	pH	2004							H 7			M 2				**M 6**						L 6					
			ADEQ is currently establishing criteria to classify its lakes, which may result in changes in assessment status (M6). For efficiency, Both TMDLs will be developed at the same time (M6). Low dissolved oxygen, which may result in fish kills, would be detrimental to this important urban recreational area (H7). More investigation is needed to identify the sources of pollutants causing these water quality problems (L6).																								

Surface Water Identification	Pollutant	Year First Listed	H 1 *	H 2	H 3	H 4 *	H 5	H 6	H 7	H 8	M 1	M 2	M 3	M 4	M 5	M 6	L 1 *	L 2 *	L 3 *	L 4	L 5	L 6	L 7 *	L 8	L 9	RANKING	TIME TABLE **
French Gulch headwaters-Hassayampa River 10 miles AZ15070103-239	Copper	1994	**H 1**										M 3		M 5	M 6						L 6				High priority	TMDL study ongoing. Completion TMDL in 2004.
	Zinc	1994	**H 1**										M 3		M 5	M 6						L 6					
	Cadmium	2004											M 3		M 5	M 6				L 4		L 6				Medium priority	
			Although this reach is intermittent, the toxic nature of copper and zinc, along with the magnitude and duration of exceedances, pose a significant threat to wildlife which may drink pools remaining after monsoon rains or winter storms (H1): * Dissolved copper was measured as high as 1200 µg/L (almost 20 times the aquatic and wildlife standard), and exceeded the standards in 80 of 135 samples (60%); * Dissolved zinc was measured as high as 2260 µg/L (almost 6 times the aquatic and wildlife standard), and exceeded standards in 36 of 170 samples (20%). Although the cadmium can be a significant threat to aquatic and wildlife uses, the chronic standard was only exceeded on this intermittent reach in only 3 of 50 sampling events (L4). For efficiency, all three TMDLs will be developed at the same time and a scheduled for 2003-2004 (M6); however, the TMDL is expected to be very complex due to the nature of the pollutants (M5) and seasonal variation (M3). Intermittent stream flow and drought conditions will slow collection of adequate data to determine source loadings (L6).																									
Gila River Centennial Wash-Gillespie Dam 5 miles AZ15070101-008	Boron	1992							H 7				M 3		M 5							L 6				Medium priority	Initiate monitoring and investigation in 2006. Initiate TMDL in 2007. Complete TMDL in 2008.
	Selenium	2004				H 4			H 7				M 3		M 5							L 6				High priority	
			The federally protected Yuma clapper rail and Southwest willow flycatcher have been found in this surface water and could be negatively impacted by elevated selenium (H4). Elevated selenium and boron may be associated with the extensive agriculture in the area; however, TMDL may be complex due to large number of potential sources and potential seasonal influences (M3, M5, L6). Boron concentrations found may impact downstream agricultural uses (H7) but present a low ecological and human health risk (L5). Coordinate TMDL investigations with boron and selenium investigation downstream, from Coyote Wash to Fortuna Wash (M6).																									

Surface Water Identification	Pollutant	Year First Listed	H 1 *	H 2	H 3	H 4 *	H 5	H 6	H 7	H 8	M 1	M 2	M 3	M 4	M 5	M 6	L 1 *	L 2 *	L 3 *	L 4	L 5	L 6	L 7 *	L 8	L 9	RANKING	TIME TABLE **
A. Gila River 1. Salt River - Agua Fria River AZ15070101-015 2. Agua Fria River - Waterman Wash AZ15070101-014 3. Waterman Wash - Hassayampa River AZ15070101-010 4. Hassayampa River - Centennial Wash AZ15070101-009 5. Centennial Wash - Gillespie Dam AZ15070101-008 6. Gillespie Dam - Rainbow Wash AZ15070101-007 7. Rainbow Wash - Sand Tank AZ15070101-005 8. Sand Tank - Painted Rocks Reservoir **B. Painted Rocks Reservoir** AZL15070101-1020A **C. Painted Rocks Borrow Pit Lake - See Colorado-Lower Gila Watershed)** **D. Salt River** 23rd Ave WWTP - Gila River AZ15060106B-001D **E. Hassayampa River** Buckeye Canal - Gila River AZ15070103-001B Total 99 miles and 100 acres	DDT metabolites, toxaphene, chlordane in fish tissue	1988 (EPA 2002)	**H 1**			**H 4**									M 5							L 6				High priority	Initiate monitoring and investigations in 2008. Initiate TMDLs in 2009. Complete TMDLs in 2010.
			These pesticides still present a high risk to aquatic life and species that prey on them (H1). The federally protected Yuma clapper rail and Southwest willow flycatchers sighted in this area could be negatively impacted by the pesticides (H4). This will be a very complex TMDL due to the size of the drainage and potential sources (M5). The TMDL will require significant monitoring resources to determine the sources of this historic pesticide (L6).																						
Mineral Creek Devils Canyon-Gila River 10 miles AZ15050100-012B	Copper	1992	H 1										M 3	M 4	M 5				**L 3**	L 4						Low priority	Initiate monitoring and investigations in 2006. Initiate TMDLs in 2008. Complete TMDLs in 2009. (Surface water to be in compliance with copper standards by April 2004 according to the signed consent decree.)
	Selenium	2004				H 4									M 5					L 4		L 6				High priority	
			The federally protected Southwest willow flycatcher found in this area could be negatively impacted by selenium. (H4). The copper poses some risk to public health and wildlife due to its toxicity (H1); however, based on a consent decree actions have been taken and have been generally successful at mitigating the copper contamination (M4)(L3). The mine monitors multiple sites on a monthly basis to evaluate the effectiveness of its actions. Further enforcement actions will be taken if compliance is not attained per consent decree by April 2004 (L3). Copper exceedances after treatment were related to storm flow (M3), and determining the source of copper during such storm flows may be complex due to historic mining and natural sources (M5). Intermittent stream flow and drought conditions have slowed collection of adequate data to determine source loadings (L6).																						
Queen Creek 1. headwaters-Superior Mine WWTP 9 miles AZ15050100-014A 2. Superior Mine WWTP - Potts Canyon AZ15050100-014B	Copper	2002 (reach A) 2004 (reach B)											M 3		**M 5**					L 4		L 6				Medium priority	Initiate monitoring and investigation in 2004. Initiate TMDL in 2005. Complete TMDL in 2006.
			A copper TMDL will be complex (M5) due to intermittent flows (L4), the nature of the pollutant (M5) and the probability that contamination is related to storm water runoff events (M3). More samples are needed to identify sources and evaluate the extent of contamination (L6). Although copper is toxic to aquatic life and wildlife, the copper listings are based on only two exceedances in nine samples and exceedances are just above standards; therefore, copper not a high risk to aquatic life and wildlife.																						

Surface Water Identification	Pollutant	Year First Listed	H 1 *	H 2	H 3	H 4 *	H 5	H 6	H 7	H 8	M 1	M 2	M 3	M 4	M 5	M 6	L 1 *	L 2 *	L 3 *	L 4	L 5	L 6	L 7 *	L 8	L 9	RANKING	TIME TABLE **
Turkey Creek unnamed tributary at 34 19 28 / 112 21 28 - Poland Creek 30 miles AZ15070102-036	Cadmium	1992	**H 1**			**H 4**		**H 6**					M 3	M 4	M 5	M 6						L 6				High priority	TMDL study ongoing. Anticipate completing TMDLs in 2004.
	Copper	1992	**H 1**			**H 4**		**H 6**					M 3	M 4	M 5	M 6						L 6					
	Lead	2004				**H 4**		**H 6**					M 3	M 4	M 5	M 6				L 4		L 6					
	Zinc	1992	**H 1**			**H 4**		**H 6**					M 3	M 4	M 5	M 6						L 6					
			Cadmium, copper, and zinc pose a significant threat to wildlife due to the toxic nature of these pollutants, and the magnitude and frequency of exceedances as follows (H1): * Dissolved cadmium was measured as high as 931 µg/L (8 times the standard), and exceeded standards in 2 of 5 samples (40%); * Dissolved copper was measured as high as 13,600 µg/L (200 times the standard) and exceeded standards in 3 of 5 samples (60%); * Dissolved zinc was measured as high as 158,000 µg/L (more than 400 times the standard) and exceeded standards in 3 out of 5 samples. Although chronic lead can be a significant threat to aquatic and wildlife, the chronic standard was only exceeded in 2 of 7 samples and at relatively low concentrations on this intermittent reach (L4). The federally protected Gila topminnow occurs in this reach and could be negatively impacted by elevated metals in the water (H4). The Forest Service is supporting the development of this TMDL and is developing plans to remediate mine waste piles along this reach (H6, M4). The TMDL investigation is on ADEQ's 2003-2004 work plan (M6) but is complex due to the nature of metals and the length of the listed stream segment (21 miles). Metal contamination may be localized, exceedances are storm dependent. (M3, M5). Intermittent stream flow and drought conditions have slowed collection of adequate data to determine source loadings (L6).																									
Salt Watershed																											
Canyon Lake 450 acres AZL15060106A-0250	Low dissolved oxygen	2004							H 7				M 3			**M 6**						L 6				Medium priority	Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
			This lake is an important recreational area (H7). Low dissolved oxygen may be related to seasonal activities (M3). More data are needed to identify sources (L6). ADEQ is currently establishing criteria to classify its lakes, which may result in changes in assessment status (M6).																									
Christopher Creek headwaters-Tonto Creek 8 miles AZ15060105-353	*Escherichia coli*	2004	**H 1**						**H 7**				M 3			M 6						L 6				High priority	Ongoing TMDL investigation. TMDL to be completed in 2004.
			Exceedances of the *Escherichia coli* standard indicate a risk to public health (H1). Portions of this stream receive extensive recreational use (H7). Exceedances appear to be seasonal (M3), but more data are needed to identify sources (L6). TMDL is being completed in conjunction with Tonto Creek TMDLs (M6).																									
Crescent Lake 157 acres AZL15060101-0420	pH	2002							H 7		M 1					**M 6**						L 6				Medium priority	Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
			ADEQ is currently establishing criteria to classify its lakes, which may result in changes in assessment status (M6). This lake is an important fishing area and high pH levels may be associated with fish kills (last reported fish kill was in 1998) (H7). More monitoring data are needed to identify pollutants causing the high pH and sources of the pollutants (L6).																									

Surface Water Identification	Pollutant	Year First Listed	H 1 *	H 2	H 3	H 4 *	H 5	H 6	H 7	H 8	M 1	M 2	M 3	M 4	M 5	M 6	L 1 *	L 2 *	L 3 *	L 4	L 5	L 6	L 7 *	L 8	L 9	RANKING	TIME TABLE **
Pinto Creek Ripper Spring - Roosevelt Lake 18 miles AZ15060103-018C	Copper	2004				**H 4**		**H 6**								M 6						L 6				High priority	Phase II copper TMDL monitoring initiated in 2000 (on upstream reach). Initiate TMDL in 2004. Complete TMDL in 2005.
	Selenium	2004				**H 4**		**H 6**														L 6				High priority	Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
			The federally protected Colorado pikeminnow and bald eagles both occur in this area and could be negatively impacted due to elevated copper or selenium (H4). There is wide public support for development of TMDLs in Pinto Creek (H6). A Phase II copper TMDL conducted in the segment above this reach will be expanded to include this reach of Pinto Creek (M6). More data are needed to identify copper sources in this lower reach (L6).																						
Salt River Stewart Mountain Dam - Verde River 10 miles AZ15060106A-003	Low dissolved oxygen	2004							H 7				M 3									L 6				Medium priority	Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
	Copper	2004							H 7													L 6				Medium priority	
			Although exceedances of the chronic copper standard can be a significant threat to aquatic and wildlife, chronic standards were only exceeded in 3 of 81 sampling events. Low dissolved oxygen may be seasonal (M3).This section of the Salt River is an important recreational area (H7). More data are needed to identify potential sources of the copper and low dissolved oxygen (L6). The federally protected Yuma clapper rail and bald eagle should not be negatively impacted by the low dissolved oxygen or elevated copper.																						
San Pedro-Willcox Playa-Rio Yaqui Watershed																											
Mule Gulch (3 reaches) 1. headwaters - above Lavendar Pit 4 miles AZ15080301-090A 2. above Lavender Pit - Bisbee WWTP 1 miles AZ15080301-090B 3. Bisbee WWTP - Highway 80 bridge 4 miles AZ15080301-090C	Copper (090A, 090B, + 090C)	1990	H 1										M 3		M 5	**M 6**						L 6		L 8		Medium priority	Ongoing TMDL investigation and monitoring. Site-specific standard development to be completed in 2004. Complete TMDL in 2005.
	Cadmium (090C)	2004	H 1										M 3		M 5	**M 6**						L 6		L 8			
	pH (090B +090C)	1990	H 1								M 1		M 3		M 5	**M 6**						L 6		L 8			
	Zinc (090C)	1990	H 1										M 3		M 5	**M 6**						L 6		L 8			

Surface Water Identification	Pollutant	Year First Listed	H1*	H2	H3	H4*	H5	H6	H7	H8	M1	M2	M3	M4	M5	M6	L1*	L2*	L3*	L4	L5	L6	L7*	L8	L9	RANKING	TIME TABLE **
			TMDLs are underway to address loadings on all three segments of Mule Gulch and tributaries contributing significant loading. These TMDLs are complex due to wastewater discharges and natural background levels of copper (M3, M5) and data for source loading is difficult to collect due to slope, intermittent and ephemeral flows, and lack of rain (L6, L8). Currently ADEQ is developing site specific standards that account for loadings from naturally occurring conditions (M6, L8). The TMDL is classified as a medium priority due to the time required for development of these standards. The mining operation in the affected segments is implementing and continuing to develop additional Best Management Practices to address contamination issues. Copper, zinc, and low pH present a significant threat to wildlife and human health (H1) due to the toxic nature of these pollutants and the magnitude and frequency of the exceedances: * Dissolved copper was as high as 12,000 µg/L (185 times the aquatic and wildlife standard) and exceeded standards in 20 of 36 samples (55%) in Mule Gulch; * Dissolved zinc was as high as 3760 µg/L (10 times the aquatic and wildlife standard) and exceeded standards in 14 of 36 samples (39%) in Mule Gulch; * This area is a documented corridor for Mexican migrant traffic. Migrants crossing Arizona's desert may drink from reaches of Mule Gulch with flow. Consumption of this water would be hazardous due to the high metal content. Note: drought has slowed sampling and the development of these TMDLs. (L6)																										
San Pedro River Mexico border - Charleston 28 miles AZ15050202-008	Copper	2004														M6						L6	L7			Medium priority	Initiate monitoring and investigation in 2005. Initiate TMDL in 2006. Complete TMDL in 2007.
			For efficiency, copper TMDL will be coordinated with the *Escherichia coli* TMDLs in the upper San Pedro River (M6). More data are needed to identify potential sources of the copper (L6). This TMDL may be more complex due to potential sources in Mexico and uncertainty of timely coordination with international entities (L7). The federally protected Southwest Willow flycatcher found in this area should not be negatively impacted by the elevated copper.																								
San Pedro River Babocomari Creek - Dragoon Wash 17 miles AZ15050202-003	*Escherichia coli*	2004	H1										M3		M5	M6						L6	L7			Medium priority	Initiate monitoring and investigation in 2005. Initiate TMDL in 2006. Complete TMDL in 2007.
			Exceedances of the *Escherichia coli* standard may represent a significant public health concern if people are swimming or even wading in the water (H1). Exceedances may be related to wet weather events (M3). The drainage area is relatively large and includes an area of Mexico, so determining the source of contamination may be complex and will require substantial monitoring data to identify sources (M5, L6, L7). Monitoring and investigation for the two reaches of the San Pedro River listed due to *Escherichia coli* will be coordinated (M6).																								
San Pedro River Dragoon Wash-Tres Alamos 16 miles AZ15050202-002	Nitrate	1990												M4	M5				**L3**							Low priority	Ongoing Superfund Cleanup remediation activities and effectiveness monitoring in this area. Initiate monitoring for TMDL in 2010. Initiate TMDL in 2011. Complete TMDL in 2012.
			The ADEQ WQARF (Superfund) Program is working with this site. The facility has instituted several actions to bring the surface and ground water into compliance with its standards and is conducting monthly monitoring of several sites along the San Pedro River (L3, M4). Although surface water quality is improving, cleanup will take time as there is significant contamination of the ground water which is seeping into the San Pedro (M5).																								
San Pedro River Aravaipa Creek - Gila River 15 miles AZ15050203-001	*Escherichia coli*	2004	H1										M3		M5	M6						L6	L7			Medium priority	Initiate monitoring and investigation in 2005. Initiate TMDL in 2006. Complete TMDL in 2007.
	Selenium	2004				**H4**									M5	M6						L6	L7	L8		High priority	
			Exceedances of the *Escherichia coli* standard may represent a significant public health concern if people are swimming or even wading in the water (H1). The federally protected bald eagle and the Southwest willow flycatcher found in this area may be negatively impacted by the elevated selenium (H4). *E. coli* exceedances may be related to wet weather events (M3). Prior monitoring and investigations should help support TMDL development; however, the drainage area is relatively large and includes an area of Mexico, so determining the source of contamination may be complex and will require substantial monitoring data to identify sources and natural background contributions (M5, L6, L7, L8). Monitoring and investigation for the two reaches of the San Pedro River listed due to Escherichia coli will be coordinated (M6).																								

Surface Water Identification	Pollutant	Year First Listed	H 1 *	H 2	H 3	H 4 *	H 5	H 6	H 7	H 8	M 1	M 2	M 3	M 4	M 5	M 6	L 1 *	L 2 *	L 3 *	L 4	L 5	L 6	L 7 *	L 8	L 9	RANKING	TIME TABLE **
Santa Cruz-Rio Magdalena-Rio Sonoyta Watershed																											
Lakeside Lake 15 acres AZL15050302-0760	Low dissolved oxygen	2004		**H 2**					**H 7**				M 3			M 6										High priority	Ongoing monitoring and investigation. TMDL will be completed in 2004.
	Ammonia	2004		H 2					H 7				M 3			M 6										High priority	
			An AZPDES permit revision is pending for a discharge to this lake (H2, M6). Low dissolved oxygen and elevated ammonia are related to historic fish kills at this lake, and the lake is an important urban recreational area (H7). Low dissolved oxygen and elevated ammonia may be related to seasonal activities (M3). Reclaimed water and storm water inputs make this TMDL complex (M5).																							
Nogales & East Nogales Wash Mexico border-Portrero Wash 6 miles AZ15050301-011	Ammonia	2004												M 4		M 6							L 7			Medium priority	Ongoing quarterly monitoring. Necessity of TMDL will be based on outcome of current international discussions regarding upgrade of treatment facility.
	Chlorine	1996												M 4		M 6							L 7			Medium priority	
	Copper	2004												M 4		**M 6**							L 7			Medium priority	
	Escherichia coli	1998	**H 1**											M 4		M 6							L 7			High priority	
			Exceedances of the *Escherichia coli* standard may represent a significant public health concern if people are swimming or even wading in the water (H1). Although ammonia, fecal coliform, chlorine are a significant threat to human health and wildlife (H1), actions to correct the situation are dependent on ongoing international negotiations between the U.S. government, Arizona, Mexico, the cities of Nogales, AZ and Nogales, Sonora, and the Mexican state of Sonora (L7, M4). Wastewater infrastructure in Mexico is badly deteriorated and must be replaced. Chlorine is sometimes added directly to the stream on the U.S. side of the border due to raw sewage overflows from Mexico. The source loadings are known and the technical means to correct the problem have been determined (M4). For efficiency, all four TMDLs will be developed at the same time (M6) if needed after facility upgrades.																							
Santa Cruz River Mexico border-Nogales WWTP 17 miles AZ15050301-010	*Escherichia coli*	2002	**H 1**					**H 6**														L 6	L 7			High priority	Stream has been dry due to drought in 2002-2003. TMDL monitoring will be initiated when flow resumes. Hope to initiate TMDL monitoring by 2006. Initiate TMDL by 2007. Complete TMDL by 2008. (Note: Long-term fixed station monitoring site at the border.)
			Exceedances of the *Escherichia coli* standard may represent a significant public health concern if people are swimming or even wading in the water (H1). This area is a corridor for Mexican migrants who may consume this water while crossing the desert, although the water is not protected for this use (H1). The Friends of the Santa Cruz River, a volunteer monitoring group, is interested in maintaining high quality water in the Santa Cruz River (H6). Completing this TMDL may be complex due to probable sources in Mexico (L7), and intermittent stream flow and drought conditions will slow collection of adequate data to determine source loadings (L6).																							
Sonoita Creek 750 feet below WWTP - Santa Cruz River 14 miles AZ15050301-013C	Zinc	2004				**H 4**																L 6				High priority	Initiate monitoring and investigation 2006. Initiate TMDL in 2007. Complete TMDL in 2008.
			The federally protected Gila topminnow occurs in this reach and could be negatively impacted by dissolved zinc (H4). Zinc exceedances just above standards; therefore, they do not represent a significant ecological health concern. Source of zinc is unknown (L6); however, a wastewater treatment plant is directly upstream from the monitoring site. Discharge monitoring reports from this treatment plant will be reviewed, and if needed, water quality improvements will be pursued through enforcement actions.																							

Surface Water Identification	Pollutant	Year First Listed	H 1 *	H 2	H 3	H 4 *	H 5	H 6	H 7	H 8	M 1	M 2	M 3	M 4	M 5	M 6	L 1 *	L 2 *	L 3 *	L 4	L 5	L 6	L 7 *	L 8	L 9	RANKING	TIME TABLE **
Upper Gila Watershed																											
Cave Creek headwaters - South Fork of Cave Creek 8 miles AZ15040006-852A	Selenium	2004			H 3																	L 6		L 8		High priority	Initiate monitoring in 2005. Initiate TMDL in 2006. Complete TMDL in 2007.
			This stream is classified as a Unique Water (H6). Further monitoring is needed to determine selenium source loading and contribution from natural sources (L6, L8).																								
Gila River Skully Creek - San Francisco River 15 miles AZ15040002-001	Selenium	2004													M 5							L 6				Medium priority	Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
			Monitoring and investigation is needed to determine potential sources of selenium (L6). Selenium may be contributed by sources in New Mexico, adding to the complexity of the TMDL (M5). Federally protected spikedace and loach minnow that occur in this area should <u>not</u> be negatively impacted by the elevated selenium.																								
Gila River Bonita Creek-Yuma Wash 6 miles AZ15040005-022	*Escherichia coli*	2004	H 1										M 3		M 5	M 6						L 6				Medium priority	Initiate monitoring and investigation in 2006. Initiate TMDL in 2007. Complete TMDL in 2008.
			Exceedances of the *Escherichia coli* standard may represent a significant public health concern if people are swimming or even wading in the water (H1). Exceedances may be related to wet weather events (M3). The drainage area is nearly 8,000 square miles, so determining the source of contamination may be complex and will require substantial monitoring data to identify sources (M5, L6). ADEQ will coordinate this investigation with the other *E. coli* TMDL downstream (M6).																								
Verde Watershed																											
East Verde River Ellison Creek - American Gulch 20 miles AZ15060203-022B	Selenium	2004																				L 6		L 8		Low priority	Ongoing fixed station monitoring. Initiate monitoring and investigation in 2010. Initiate TMDL investigation in 2011 Complete TMDL in 2012.
			Further monitoring and investigation is needed to determine source loadings and contribution from natural sources (L6, L8) The federally protected Gila trout that occur in this area should <u>not</u> be negatively impacted by the slightly elevated selenium.																								
Verde River Bartlett Dam - Camp Creek 7 miles AZ15060203-004	Copper	2004				**<u>H 4</u>**			H 7												L 5	L 6				High priority	Initiate monitoring and investigation in 2007. Initiate TMDL in 2008. Complete TMDL in 2009.
	Selenium	2004				**<u>H 4</u>**			H 7												L 5	L 6					
			The Federally protected razorback sucker and bald eagle occur in this area. The copper may negatively impact the razorback sucker and the selenium may negatively impact the bald eagle (H4). Although exceedances of the chronic copper and selenium standards can be a significant threat to aquatic life and wildlife, chronic standards were only exceeded in 4 of 80 copper sampling events and 4 of 23 selenium sampling events (L5). This section of the Salt River is an important recreational area (H7). More data are needed to identify potential sources of the copper and low dissolved oxygen (L6).																								
Whitehorse Lake 41 acres AZL15060202-1630	Low dissolved oxygen	2004							H 7							**<u>M 6</u>**						L 6				Medium priority	Monitoring and investigation initiated in 2001. Initiate TMDL in 2005. Complete TMDL in 2006.
			ADEQ is currently establishing criteria to classify its lakes which may result in changes in assessment status (M6). Classification is to be completed by 2004. Low dissolved oxygen may result in fish kills, and this lake is an important fishing area (H7). More investigation is needed to identify the sources of pollutants causing the low dissolved oxygen (L6).																								

X = Factor present. **<u>X</u>** = most significant factors. Note that factors that frequently out rank others are shown with an asterisk (*).
** Date shown is when action is to be initiated. Time table will be adjusted based on availability of flowing water, as Arizona is currently in a drought, and availability of resources to complete TMDLs.

High Priority Factors:
H1. Substantial threat to health and safety of humans, aquatic life, or wildlife based on:
- a. Number and type of designated uses impaired,
- b. Type and extent of risk from the impairment to human health or aquatic life,
- c. Pollutant causing the impairment, or
- d. Severity, magnitude, and duration the surface water quality standard was exceeded.

H2. An new or modified individual NPDES or AZPDES permit is sought for discharge to the impaired water.
H3. Surface water is listed as a Unique Water or is part of an area classified as a “wilderness area”, “wild and scenic river” or other federal or state special protection of the water resource.
H4. Surface water contains a species listed as “threatened” or “endangered” under the federal Endangered Species Act and the presence of the pollutant in the surface water is likely to jeopardize the listed species.
H5. A delay in conducting the TMDL could jeopardize ADEQ’s ability to gather sufficient credible data necessary to develop the TMDL.
H6. There is significant public interest and support for development of a TMDL.
H7. The surface water or segment has important recreational and economic significance to the public.
H8. The pollutant has been listed for eight years or more (starting with the 2002 listing).

Medium Priority Factors:
M1. The surface water fails to meet more than one designated use.
M2. The pollutant exceeds more than one surface water quality standard.
M3. The exceedance is correlated to seasonal conditions caused by natural events such as storms, weather patterns, or lake turnover.
M4. Actions in the watershed may result in the surface water attaining applicable water quality standards; however, load reductions may take longer than the next 303(d) listing cycle.
M5. The type of pollutant and other factors relating to the surface water or segment make the TMDL very complex.
M6. ADEQ’s administrative needs, including TMDL schedule commitments with EPA, permitting needs, or basin priorities that require completion of the TMDL.

Low Priority Factors:
L1. ADEQ has formally submitted a proposal to delist the surface water or pollutant to EPA. If ADEQ makes the submission outside of listing process cycle, the change in priority ranking will not be effective until EPA approves the report.
L2. ADEQ has modified or formally proposed a modification to the applicable surface water quality standard or designated use which would result in the surface water no longer being impaired, but the modification has not yet been approved by EPA.
L3. The surface water is expected to attain surface water quality standards due to any of the following:
    a. Recently instituted treatment levels or best management practices in the drainage area,
    b. Discharges or activities related to the impairment have ceased, or
    c. Actions have been taken and the controls are in place or scheduled for implementation that are likely to bring the surface water back into compliance.
L4. The surface water is ephemeral or intermittent. ADEQ shall re-prioritize the surface water if the presence of the pollutant in the listed water poses a threat to the health and safety of humans, aquatic life, or wildlife using the water (H1) or the pollutant is contributing to the impairment of a downstream, perennial surface water.
L5. The pollutant poses a low ecological and human health risk.
L6. Insufficient data exist to determine the source of the pollutant load.
L7. The uncertainty of timely coordination with national and international entities concerning international waters makes TMDL development complex.
L8. Naturally occurring conditions are a major contributor to the impairment.
L9. No documentation or effective analytical tools exist to develop a TMDL for the surface water with reasonable accuracy.

Table 32. TMDL priority ranking for waters added by EPA

Surface Water Identification	Pollutant	Ranking
Bill Williams Watershed		
Boulder Creek unnamed trib - Wilder Creek AZ15030202-006B	Mercury	Low
Boulder Creek Wilder Creek - Butte Creek AZ15030202-005A	Mercury	Low
Burro Creek Boulder Creek - Black Canyon AZ15030202-004	Mercury	Low
Coors Lake AZL15030204-5000	Mercury in fish tissue	Medium
Colorado - Grand Canyon Watershed (no additions)		
Colorado - Lower Gila Watershed (no additions)		
Little Colorado - San Juan Watershed		
Bear Canyon Lake AZL15020008-0130	pH	Low
Little Colorado River Silver Creek - Carr Wash AZ15020002-004 (see also priority for copper and silver in Table 30 above)	Sediment	Low
Long Lake AZL15020008-0820	Mercury in fish tissue	Medium
Lyman Lake AZL15020001-0850	Mercury in fish tissue	Medium
Soldier's Annex Lake AZL15020008-1430	Mercury in fish tissue	Medium
Soldier's Lake AZL15020008-1440	Mercury in fish tissue	Medium
Salt River Watershed		
Tonto Creek headwaters - unnamed tributary AZ15060105-013A	Dissolved oxygen Nitrogen	Medium
Tonto Creek unnamed tributary - Haigler Creek AZ15060105-013B	Nitrogen	Medium

San Pedro - Willcox Playa - Rio Yaqui Watershed		
Brewery Gulch Wildcat Canyon - Mule Gulch AZ15080301-337	Copper	Medium
Santa Cruz - Rio Magdalena - Rio Sonoyta Waterhsed		
Lakeside Lake AZL15050302-1260 (see also priority for dissolved oxygen and ammonia above)	Nitrogen Phosphorus Chlorophyll	High
Parker Canyon Lake AZL15050301-1040	Mercury in fish tissue	Medium
Rose Canyon Lake AZL15050302-1260	pH	Low
Upper Gila Watershed		
Gila River Bonita Creek - Yuma Wash AZ15040005-002 (see also priority for *E. coli* in Table 30 above)	Sediment	Low
San Francisco River headwaters - New Mexico border AZ15040004-023	Sediment	Low
Verde Watershed		
Granite Creek headwaters - Willow Creek AZ15060202-059A	Dissolved oxygen	Low
Watson Lake AZL15060202-1590	Nitrogen Dissolved oxygen pH	Medium

A large tailings pile, leftover from the now abandoned Golden Turkey Mine, lies along the stream bank of Turkey Creek. These tailings are considered to be major contributing sources of the cadmium, copper, lead, and zinc that impair this stream. TMDL investigations are ongoing on this reach of Turkey Creek, near Bumble Bee, Arizona.